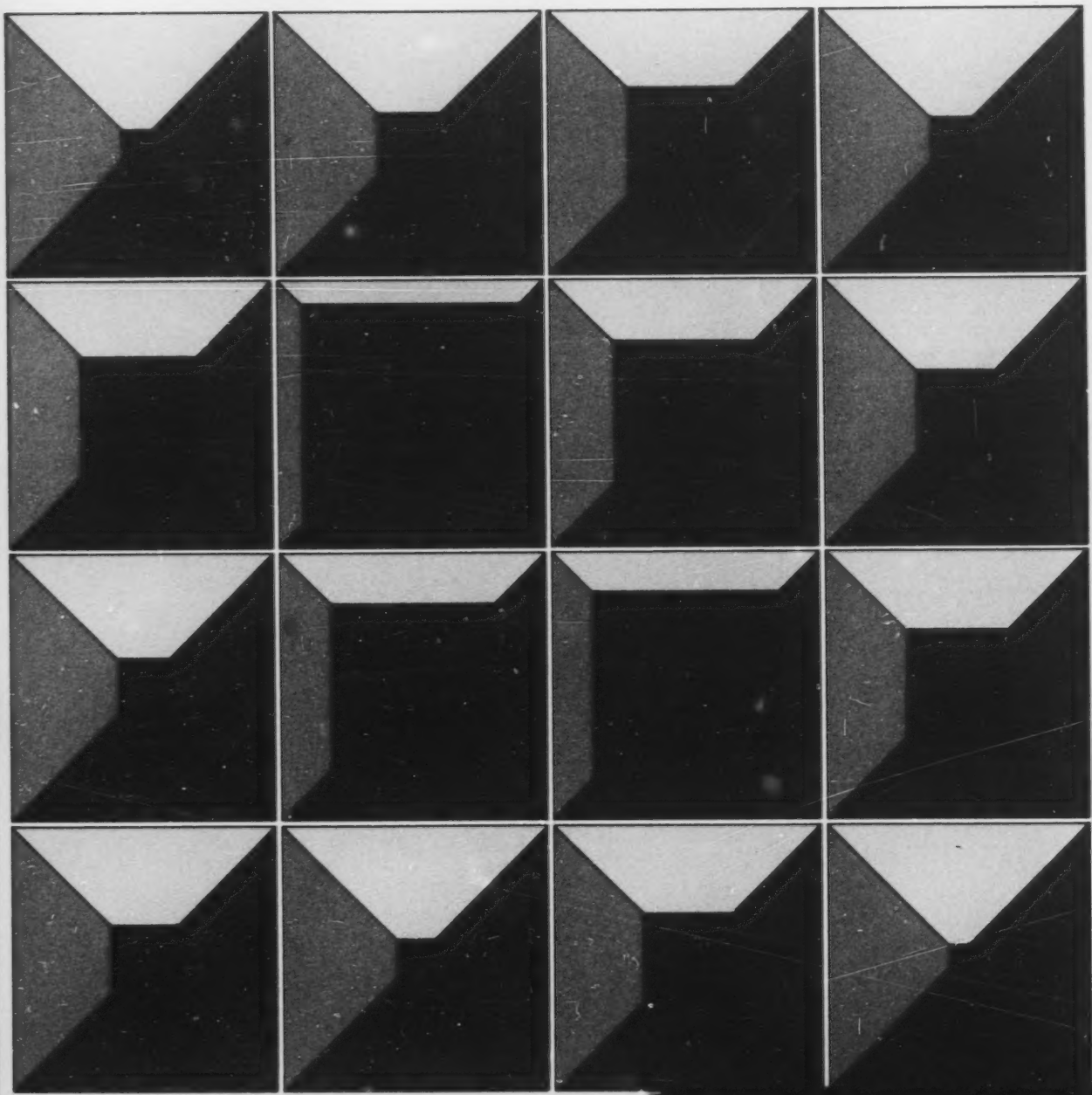
A CBO STUDY

CHANGING THE STRUCTURE OF MEDICARE BENEFITS: ISSUES AND OPTIONS

MARCH 1983

Congress of the United States
Congressional Budget Office



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PREFACE

The rapid growth of the Medicare program since its introduction in 1966 and the financing problem facing its Hospital Insurance trust fund in the next decade have focused attention on ways to control federal outlays in this area. This paper, prepared at the request of the Senate Finance Committee, explores potential changes in Medicare's benefit structure. It examines options for increasing the share of medical care costs paid by beneficiaries and changes that would improve the protection of the elderly and disabled against catastrophic medical expenditures. In addition to calculating the federal savings from each option, the paper estimates the impact of such changes on individual enrollees. In keeping with the mandate of the Congressional Budget Office (CBO) to provide objective and impartial analysis, this paper contains no recommendations.

Marilyn Moon of the CBO's Human Resources and Community Development Division prepared the paper under the supervision of Nancy M. Gordon and Paul B. Ginsburg. Many people, both outside of the CBO and on the CBO staff, provided valuable technical and critical contributions. The author especially wishes to thank Marian Gornick of the Health Care Financing Administration, Louise Russell of the Brookings Institution, Jack Ebeler of the House Energy and Commerce Committee staff, and Wendell Primus of the House Ways and Means Committee staff for their careful review of the paper. Within the CBO, the author would like to thank Patricia Ruggles, Malcolm Curtis, Lisa Potetz, Paul Cullinan, and Jim Vertrees. Carl Schmertmann and Howard Levine provided the computer analysis for the project. The manuscript was edited by Francis Pierce and Robert L. Faherty. Jill Bury typed numerous drafts and prepared the paper for publication; Norma A. Leake and Toni Foxx also typed several early drafts.

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Director

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SUMMARY

Rapid growth of the Medicare program threatens the solvency of its Hospital Insurance trust fund. Since 1970, Medicare outlays have been increasing at an average annual rate of 17.7 percent and in fiscal year 1982 they were over $50 billion. Current projections see the Hospital Insurance trust fund as depleted by 1987 or 1988 and running increasing deficits in the years afterward (see Summary Figure 1).

Although no single change is likely to be sufficient to solve the financing problem, one way to stem increasing outlays would be to require enrollees to pay a greater share of the costs of Medicare-covered services.[1] This could generate large savings, although it would do so by substantially increasing medical care costs to the elderly and disabled. For example, one of the broadest options considered here would reduce outlays by $2.3 billion in 1984. It would add $112 to the $505 that the average elderly enrollee will contribute in 1984 for Medicare-covered services, and increase the cost of a hospital stay by $463. Since the burden of these increased costs would tend to fall disproportionately on beneficiaries in poor health, many would prefer to combine any increase in cost-sharing with a limit on the amount that an individual enrollee would be required to pay.[2] Unless such a limit was set very high, however, it would eliminate much of the savings.

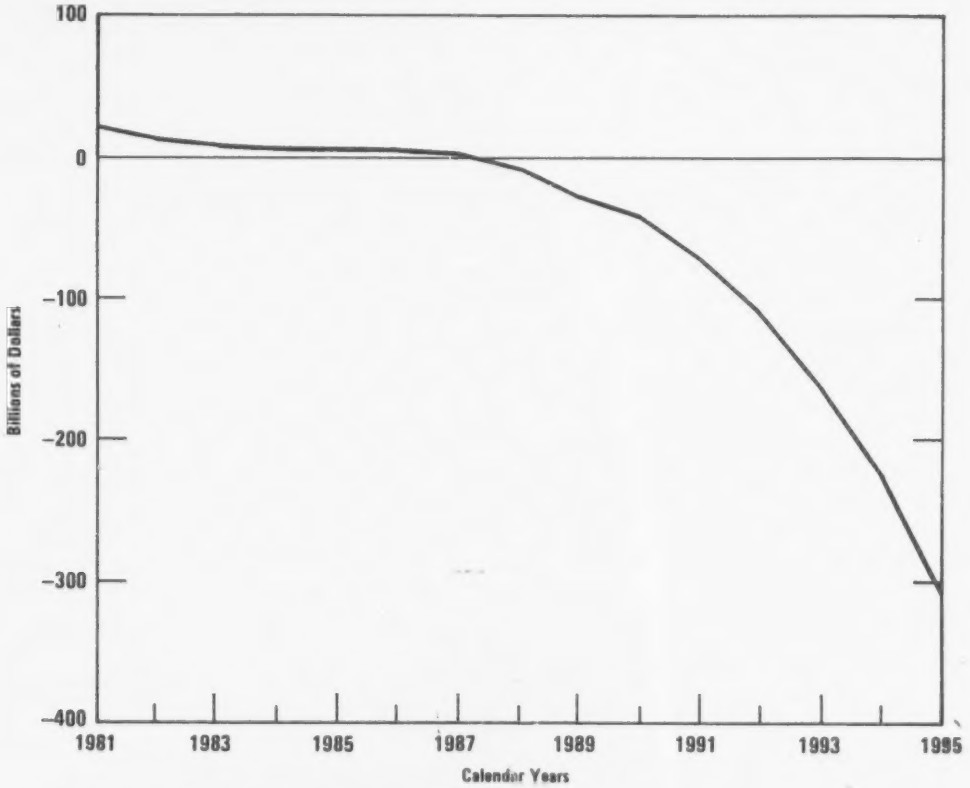
This paper focuses on a variety of options that would increase cost-sharing by enrollees, with and without limits on liability. These options would vary in their effects. The savings to the government would also vary, depending upon the proportion of costs shifted to enrollees and the extent to

1. None of the options considered in this paper would generate enough savings to do more than postpone the onset of the problem for one or two years. To eliminate the deficit through greater cost-sharing would require a very large increase in costs to beneficiaries. Alternatively, reimbursements to physicians or hospitals could be cut or taxes could be increased. For more discussion of this issue and of other alternatives to improve the financial outlook of the Hospital Insurance trust fund, see Special Committee on Aging, U.S. Senate, Prospects for Medicare's Hospital Insurance Trust Fund, 98:1 (March 1983).

2. In this paper the term "enrollees" refers to all elderly and disabled persons covered by Medicare, while the term "beneficiaries" refers to those receiving benefits in the form of covered services.

Summary Figure.

End-of-Year Balances in the Hospital Insurance Trust Fund



SOURCE: Preliminary CBO estimates.

NOTE: The figures presented here assume that the hospital reimbursement payment rates created under the Social Security Amendments of 1983 will be updated yearly so as to maintain the same level of stringency as would have occurred if the Tax Equity and Fiscal Responsibility Act of 1982 had been extended. See Appendix A for additional information.

which beneficiaries would be induced to lower their use of Medicare-covered services. To understand these effects, it is necessary to examine the structure of the Medicare program and its patterns of use.

THE CURRENT STRUCTURE OF MEDICARE

Medicare serves as the principal insurer of acute health care expenditures for 29 million elderly and disabled persons. The program is divided

into two parts: Hospital Insurance (HI), which is dominated by short-stay hospital inpatient care, and Supplementary Medical Insurance (SMI), which covers physician visits and other ambulatory care. The HI portion is supported almost entirely by part of the Social Security payroll tax. SMI, on the other hand, is an optional insurance plan requiring a monthly premium (currently set at $12.20) that covers about 25 percent of program costs. The remainder of SMI outlays are financed from general revenues.

Medicare reimburses hospitals and most other providers directly for the costs of covered services used by enrollees. In cases where physicians and other SMI providers decline to accept the charges established as reasonable by Medicare, beneficiaries pay them directly and then seek partial reimbursement from Medicare.[3]

Medicare now requires its beneficiaries to pay a considerable share of the costs of covered services. The HI portion charges a first-day deductible amount for short-stay inpatient care, plus coinsurance on days 61 through 150 of a hospital stay during one benefit period and on days 21 through 100 for stays in a skilled nursing facility (SNF).[4] SMI assesses an annual deductible amount of $75 and coinsurance of 20 percent of allowed charges on all covered services except home health care.[5]

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3. The allowed or reasonable charges for SMI are established as the lowest of the rate prevailing in a given area for that service, the usual charge by the provider, and the actual bill submitted. Enrollees may also be liable for additional charges in excess of the allowed amounts if physicians and other providers choose to bill for such amounts. It is not known whether beneficiaries actually pay these excess costs.

4. Coinsurance refers to the percentage of the costs of each unit of care that beneficiaries are required to pay. In some cases--for example, for hospital coinsurance--coinsurance is expressed as a percent of the deductible amount for hospital care. A benefit period begins with the first day of hospitalization and ends when the beneficiary has not been a bed patient in a hospital or a SNF for 60 consecutive days. The deductible amount for 1983 is $304. The hospital coinsurance is 25 percent of the deductible amount for days 61 through 90 and one-half of the deductible for lifetime reserve days (91 through 150). The SNF coinsurance charge is set at one-eighth of the hospital deductible amount.

5. For purposes of this analysis, additional charges passed on to beneficiaries when providers do not accept assignment are not included in cost-sharing estimates.

If SMI premiums are considered part of cost-sharing, a Medicare enrollee will pay on average $505 in cost-sharing in calendar year 1984, 80 percent of which will be for SMI deductible amounts, coinsurance, and premiums. In addition, enrollees will also be liable for health expenses not covered by Medicare or Medicaid (the major federal health care program for the poor). The amount of this additional liability for noninstitutional care is likely to be about $550 in 1984, for the average elderly beneficiary.[6] Altogether, these expenditures on noninstitutional care will range from an average of 21 percent of income for those with family income under $5,000 to 2 percent for those with family income above $30,000.

SOURCES OF FEDERAL SAVINGS FROM INCREASED MEDICARE COST-SHARING

Increases in Medicare cost-sharing would cut federal spending primarily by shifting liability to enrollees, but might also reduce enrollees' use of covered services. In addition, the cost-sharing could be structured to encourage enrollees to use less expensive providers.

The Direct Impact of Increased Enrollee Liability

Increased cost-sharing would directly shift responsibility for additional expenses from the federal government to individual enrollees except for those who participate in other programs such as Medicaid. The impact on individuals would depend on the extent of their private insurance coverage and the particular form of the cost-sharing change.

For the more than 60 percent of Medicare enrollees with private insurance supplementing Medicare, the cost of higher deductible amounts and coinsurance would be reflected in higher premiums on their private insurance--amounting to approximately the average increase in cost-sharing (plus any increased administrative costs of such insurance). But those without private coverage would have to pay additional costs directly. For those with high medical charges--for example, for a long hospital stay--the added burden would be considerable.

The Indirect Effects of Lower Health Care Use

Cost-sharing might achieve additional reductions in outlays if it led to lower use of Medicare-covered services. While studies on Medicare enrol-

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6. The average projected cost for nursing home care will add almost another $650 to the total.

lees have been limited, results for the younger population suggest that cost-sharing--and particularly coinsurance on physician services--lowers use.

These indirect effects would be relatively small, however, because private supplemental insurance insulates the majority of beneficiaries from increases in costs associated with use of services. Only about one-fourth of Medicare enrollees have neither private insurance nor Medicaid, and would feel the impact in the form of higher out-of-pocket costs for medical care services.[7]

SPECIFIC OPTIONS FOR INCREASED COST-SHARING

This study presents options illustrating the many changes possible in Medicare's benefit structure. They would generate changes ranging between a cost of $1.9 billion and savings of $2.6 billion in fiscal year 1984 (see Summary Table 1). The average increase in individual liability for elderly, noninstitutionalized enrollees would also vary substantially among the options.[8]

These options highlight important tradeoffs. The broad-based ones would spread the costs among the largest number of enrollees, ensuring that no one enrollee faced a large increase in cost-sharing. On the other hand, increases tied directly to use of Medicare-covered services would burden a small proportion of enrollees, but would be more likely to result in somewhat lower use of Medicare-covered services.

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7. It is not known whether those who are not covered by private insurance have chosen not to purchase it or have been rejected by insurers, but this would be an important issue in evaluating the impact of cost-sharing options. There is some evidence to indicate that, the higher the family income, the more likely the person will have private insurance.

8. To estimate precisely what enrollees would pay requires additional information about Medicaid coverage and private insurance paid for by others, which reduce actual liability. Insurance purchased by the family to supplement Medicare might actually raise average liability somewhat to cover added administrative costs, but it would protect against extraordinary increases resulting from an extended hospital stay, for example. Such adjustments are discussed in more detail in Chapter V.

Options Affecting a Large Percentage of Enrollees

Options tied directly to use of medical services would not spread costs widely, since in any one year relatively few enrollees would be affected. Consequently, the broadest-based cost-sharing change would be to increase the SMI premium, which is assessed against enrollees even when they have no medical expenditures, or to introduce an HI premium. An increase in SMI premiums to cover 35 percent of the per capita program costs for aged enrollees would raise annual costs to enrollees by $68 in 1984, yielding total federal savings in fiscal year 1984 of $1.4 billion. The broad-based option, an HI premium of $10 per month, would provide savings of $2.5 billion in fiscal year 1984. There would be no indirect savings from either of these options, since the premiums would not be tied to use of health care services.

A somewhat less broad-based change would be an increase in the deductible amount charged enrollees before Medicare begins to pay for covered services--for example, a deductible of $100 for SMI. This option would reduce federal spending by $0.2 billion. About 70 percent of SMI enrollees would be affected.

Options That Vary More Directly With Use of Medical Services

A major argument in support of increased cost-sharing--especially coinsurance--is that it would lower the use of medical services by beneficiaries. A counter argument is that increased cost-sharing would impose the heaviest burden on those who already have the highest expenses. In addition, since many beneficiaries have private insurance that would likely pay much of the coinsurance, the reduction in use of medical services would be limited. The paper considers three basic options for changing coinsurance:

- Increasing SMI coinsurance from 20 percent to 25 percent of allowed charges;
- Adding hospital coinsurance of 10 percent of the deductible amount for each hospital day in the calendar year beginning with the second day of hospitalization (and eliminating the current coinsurance on days 61 through 150); and
- Changing hospital coinsurance as in the second option, but limiting its application to days 2 through 30.

The effects of the first option would be relatively uniform among age and income groups. Although some beneficiaries with very high SMI use would be subject to disproportionately higher cost-sharing, the impact would

SUMMARY TABLE 1. FEDERAL SAVINGS FROM CHANGES IN MEDICARE'S BENEFIT STRUCTURE, AND THE COSTS FOR ELDERLY ENROLLEES, 1984

Option[a]	Fiscal Year Federal Savings (billions of dollars)[b]	Average Increased Calendar Year Costs per Capita (dollars)	
		All Elderly Enrollees	Elderly Enrollees with 1984 Cost-Sharing in Excess of $1,000
SMI Premium Increase	1.4	68	68
HI Premium	2.5	120	120
SMI Deductible Increase	0.2	13	20
SMI Coinsurance of 25 Percent	0.6	40	212
Hospital Coinsurance of 10 Percent of Deductible	1.7	72	376
With $1,000 limit	-1.9	-81	-841
With $2,000 limit	0.3	15	-122
With $3,000 limit	1.0	46	149
With $4,000 limit	1.3	59	203
With $2,000 limit for those with incomes below $20,000; otherwise rising to $4,000	0.6	29	1
With $1,500 limit for those with incomes below $20,000; otherwise rising to $3,000	0.1	.10	-226
Hospital Coinsurance of 10 Percent of Deductible for Days 2-30	1.2	52	212
Combination Option 1[c]	2.6	120	280
Combination Option 2[d]	2.3	112	589
Combination Option 3[e]	1.8	74	379

SOURCE: Congressional Budget Office simulations from National Medical Care Expenditure Survey and Medicare History Sample.

a. More detailed descriptions of these options are available in Chapter V.
b. Savings for the options have been estimated independently and cannot, in general, be added together.
c. Increase in SMI premium to 35 percent and shift in hospital coinsurance to days 2-30 at 10 percent of deductible amount.
d. Change in hospital coinsurance to cover all days at 10 percent of deductible amount and increase in SMI coinsurance to 25 percent.
e. Coinsurance of 10 percent on hospital stays, 5 percent on skilled nursing facilities, and coinsurance of 10 percent of the cost of each home health visit.

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be spread across more than two-thirds of Medicare enrollees, increasing their annual liability by an average of $40 if coinsurance of 25 percent were imposed.

The other two options--changes in hospital coinsurance--would have their greatest impact on beneficiaries in the highest cost-sharing brackets. For example, while the full 10 percent hospital coinsurance option would increase costs to all elderly enrollees by an average of $72, the average increase for hospitalized enrollees would be $351. Nearly half of federal savings would be achieved from the 5 percent of enrollees who have annual hospital stays in excess of 20 days, who would pay $685 more on average. (A very few high users would gain from eliminating the relatively high coinsurance currently assessed after hospital day 60 of a spell of illness, as well as from eliminating the expenditures made after Medicare benefits are exhausted.)

OPTIONS TO INCREASE CATASTROPHIC PROTECTION

Increases in Medicare cost-sharing would be likely to increase the pressure to improve catastrophic protection for beneficiaries. For some, the burden of cost-sharing is already high: elderly enrollees in the top 11 percent of use of Medicare-covered services are expected to face average cost-sharing of $1,675 in calendar year 1984. These beneficiaries would be most affected by an increase in coinsurance, for either hospital care or SMI.

Placing Limits on Cost-Sharing

It would be easy to limit the amount of Medicare-related costs required of any beneficiary in a year (or perhaps over several years).[9] Combining a limit on cost-sharing with increased hospital coinsurance would result in a more equal distribution of the burden, but at the expense of a considerable loss in federal savings. Further, above a certain point it might also remove incentives for high users to restrain their use.[10]

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9. An alternative approach would be to defer some cost-sharing until the deaths of the beneficiaries and their dependents.

10. The most likely response to such a change in incentives would be for patients to remain in a hospital rather than moving to a facility such as a nursing home when such care would be appropriate.

The options discussed here use four limits on the combined beneficiary liability from HI and SMI cost-sharing in conjunction with 10 percent hospital coinsurance on all days after the first. The amount of federal savings achieved would be highly sensitive to the value of the limit. For example, a $1,000 annual limit would result in a net rise in federal Medicare outlays, since many beneficiaries now have liabilities in excess of $1,000 without an increase in hospital coinsurance. Even a $3,000 annual limit would result in federal savings 70 percent lower than without a limit on cost-sharing. Overall, the lower the limit, the smaller the increase in average enrollee liability and the greater the proportion of enrollees affected by the limit. At the $1,000 limit, 16 percent of enrollees would benefit, while at $4,000 only 1 percent would benefit.

Varying Cost-Sharing Changes with Income Level

Cost-sharing could also be varied according to the incomes of enrollees. This could be done by assessing higher cost-sharing on those with higher incomes, or by varying the limit on cost-sharing to provide greater protection for those with low incomes. Varying the limit would allow greater protection for those least able to afford cost-sharing than would a uniform increase in cost-sharing generating the same reduction in federal outlays.

Many would oppose converting a social insurance program into a means-tested one, however. In addition, such options would involve a number of practical problems. For one thing, income may not be the best indicator of ability to pay, since the elderly often have other assets such as their homes. Moreover, families of different size and composition may have varying demands on their resources. If a means test is modified to meet these difficulties, it then becomes more complex to measure and monitor. These are not insurmountable obstacles to means-testing, though, since the same problems arise in other programs that are currently means-tested.

The paper examines two options that would tie cost-sharing to the family income of the enrollee. In the first, cost-sharing would be limited to $2,000 for those with 1983 family incomes less than $20,000--a group that includes about 68 percent of the beneficiaries. The limit would be increased gradually, ultimately reaching a maximum of $4,000. Total federal savings would be $1 billion in fiscal year 1984, with enrollees paying $29 more, on average. In the second, the caps would be $1,500 and $3,000 and the same income cutoff would be used. Savings to the federal government would be $0.1 billion, while elderly enrollees would, in calendar year 1984, pay $10 in additional cost-sharing, on average.

CHAPTER I. INTRODUCTION

Medicare serves as the major source of insurance for acute medical care services for the elderly and, since July 1973, for disabled persons receiving Social Security. In fiscal year 1982, nearly 29 million persons were enrolled in Medicare Hospital Insurance, 90 percent of whom were 65 or older.

Medicare is organized in two parts--Hospital Insurance (HI) and Supplementary Medical Insurance (SMI). HI covers mainly short-stay hospitalization and is available without charge to eligible enrollees. SMI coverage is voluntary for persons 65 and over and for eligible disabled persons, all of whom must pay a monthly premium to participate. SMI covers physician and other outpatient services.

Beneficiaries are required--under both portions of Medicare--to share some of the costs of covered services.[1] Hospitalized beneficiaries must pay a deductible amount in each benefit period, but are not liable for any additional costs until they have been hospitalized more than 60 days. Skilled nursing home care through HI also requires some cost-sharing on the part of beneficiaries. Under SMI, the most important cost-sharing is the 20 percent of each covered service (except home health care) that must be paid by the beneficiary once a relatively small deductible has been met.

Pressures to change the benefit structure of Medicare arise from two competing sources. First, in a period of budget stringency, the size and growth of the Medicare program have made it a target for potential cutbacks. Moreover, the HI trust fund faces a financial crisis later in this decade, so either outlays must be reduced, revenues must be increased, or a combination of the two must be enacted. On the other hand, a second source of concern is the absence of protection against catastrophic medical expenditures under Medicare. The amount that beneficiaries are required to contribute for long hospital stays--for both HI and SMI services--can be very large. This situation has led to calls for expanded rather than reduced benefits for the eligible population.

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1. This coverage is discussed in more detail in Chapter II. As used in this paper, the term "enrollee" refers to all persons covered by Medicare, while "beneficiary" will be used to describe those actually receiving covered services. "Cost-sharing" refers to the requirement that beneficiaries pay some of the costs incurred for providing services.

This paper examines the effects of two potential changes in Medicare's benefit structure: increased cost-sharing on the one hand, and improved protection against catastrophic amounts of medical expenditures by beneficiaries on the other. A variety of options will be considered with emphasis on their impact on individual enrollees, particularly the elderly.

ISSUES AND STRATEGIES FOR CONTROLLING MEDICARE OUTLAYS

The Medicare program of health insurance for the aged and disabled constitutes one of the largest and most rapidly growing areas of the federal budget. Medicare alone accounted for about 7 percent of federal outlays in fiscal year 1982. Between 1970 and 1982, Medicare outlays increased at an annual rate of 17.7 percent, reflecting the effects of expanded eligibility to include the disabled, the increased use of services by existing beneficiaries, and the rising costs of medical care. Even after the changes enacted in the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA), Medicare outlays are projected to reach $112 billion by 1988--increasing at an average annual rate of 14.4 percent from 1983 through 1988. If there are no further policy changes, Medicare's share of total federal outlays will rise to 10 percent by 1988.

In addition to concern over the size of the federal deficit, the solvency of the Medicare Hospital Insurance trust fund is also at issue. The HI portion of Medicare is funded primarily by payroll taxes paid by employers and employees. Since 1966, these taxes have been assessed in conjunction with Social Security payroll taxes and the revenues placed in the HI trust fund. Benefits are then paid out of that trust fund. (Supplementary Medical Insurance, on the other hand, is supported jointly by general revenue funds and enrollees' contributions in the form of monthly premiums.)

The projected future growth in the HI portion of Medicare will result in outlays exceeding trust fund revenues in every year and a deficit in the year-end balance by calendar year 1987 or 1988.[2] Since, under current law, benefit payments must be made from the trust fund, concern about the size of Medicare reflects financing problems as well as the broader issue of controlling federal spending (see Figure 1 and Appendix A).

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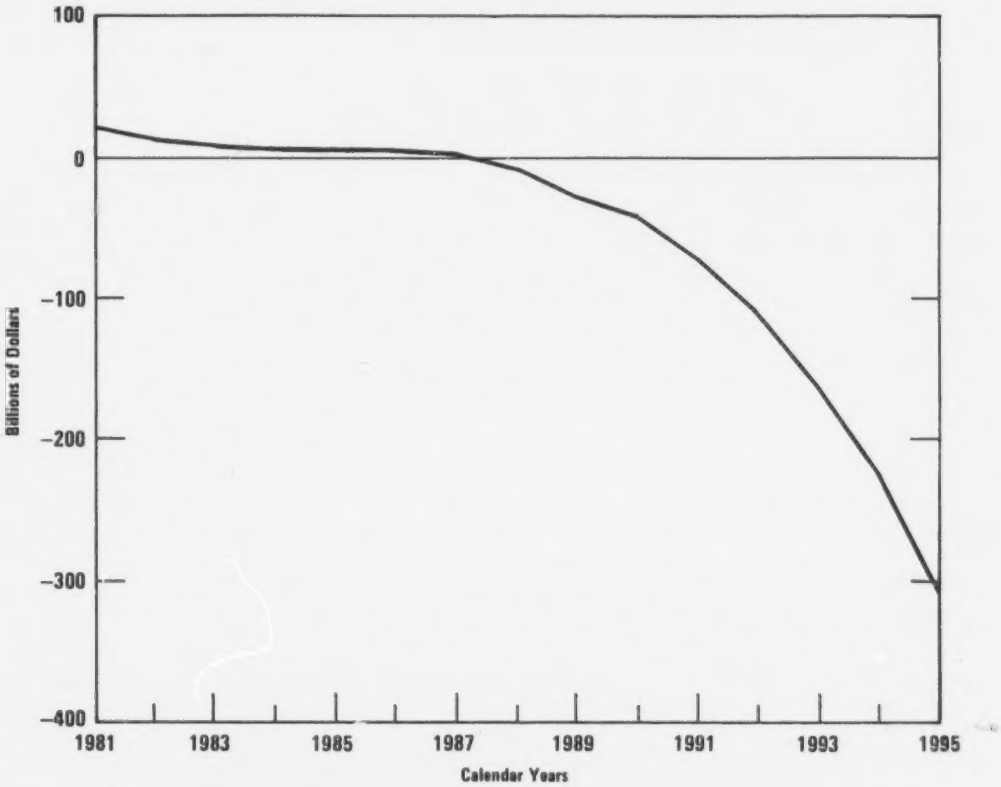
2. These figures assume that the other Social Security trust funds do no further borrowing from the HI fund. If the reimbursement changes enacted in TEFRA for hospitals are extended at their 1985 degree of stringency, a deficit in the HI trust fund would be postponed until 1988.

Figure 1.

End-of-Year Balances in the Hospital Insurance Trust Fund



SOURCE: Preliminary CBO estimates.

NOTE: The figures presented here assume that the hospital reimbursement payment rates created under the Social Security Amendments of 1983 will be updated yearly so as to maintain the same level of stringency as would have occurred if the Tax Equity and Fiscal Responsibility Act of 1982 had been extended. See Appendix A for additional information.

The benefit structure of Medicare could be changed in a number of ways to increase enrollee cost-sharing, thereby lowering Medicare outlays. Often, this would involve increased patient liability for some portion of the charge for each medical event. For example, coinsurance (a flat percentage of the charge) or higher copayments (a set dollar amount per event) could be

assessed for each day in the hospital.[3] Enrollees might also be made liable for some portion of the costs in the form of higher deductible amounts before Medicare begins reimbursement for services. Finally, the introduction of an HI premium or an increase in the SMI premium might also be considered a form of increased cost-sharing.

Changes in the benefit structure alone--unless they were very large--would not be sufficient to solve the HI financing problems that will arise over the next decade. Indeed, the options considered here would only delay the onset of the deficit in the HI trust fund. They might, however, represent one part of a more comprehensive package to address the HI financing problem. Other elements might include, for example, restricting reimbursements to providers or replacing the current program with a system of vouchers, both of which are analyzed elsewhere.[4]

ISSUES AND STRATEGIES FOR EXPANDING MEDICARE BENEFITS

Less than half of the health care expenditures of the elderly are reimbursed through Medicare. Even for covered services, no protection is offered to limit extraordinary out-of-pocket costs. For example, hospital insurance covers only 90 days per benefit period--defined as a spell of illness in which hospital stays are separated by less than 60 days--although a lifetime reserve of 60 days can also be applied when needed.[5] After the first 60 days of a stay, patients must share a portion of costs.

The benefit structure of Medicare could be changed so as to provide more comprehensive protection for extended hospital stays or other extraordinary use of covered services. One major approach would be to introduce a limit on beneficiaries' cost-sharing liability for Medicare-covered services.

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3. The term "coinsurance" generally refers to the percentage of the cost of care paid by beneficiaries. As currently used for HI services, however, coinsurance is expressed as a percentage of the hospital deductible amount.

4. These broad financing issues are discussed in Special Committee on Aging, U.S. Senate, Prospects for Medicare's Hospital Insurance Trust Fund, 98:1 (March 1983). For a discussion of proposals for the use of vouchers in Medicare, see Congressional Budget Office, Containing Medical Care Costs Through Market Forces (May 1982), Chapter IV.

5. The lifetime reserve is limited to a total of 60 days over the entire lifetime of a beneficiary.

Such limits would increase outlays or reduce net savings if introduced in combination with additional cost-sharing.

EXAMINING CHANGES IN THE BENEFIT STRUCTURE

Each of the options discussed in this paper will be analyzed in terms of the following three questions:

- How would changes in the benefit structure be distributed among the elderly and disabled?
- How would beneficiaries' use of medical care change?
- What would be the impact on federal spending?

The distributional effects of some of the options would depend on whether enrollees have other sources of funds. Thus the ability of the aged and disabled to absorb the costs of medical care varies with income. The actual burden borne by Medicare enrollees also depends on their access to public sources of support. For example, the Medicaid program--which provides medical care for some low-income persons--might absorb any additional cost-sharing for those covered by both programs. Finally, since medical problems may extend over time, the distribution of costs over periods other than a calendar year is likely to be of interest.

Increased cost-sharing is generally believed to lead to lower use of health care services, although most studies supporting this argument have not focused specifically on the elderly or disabled. Even so, the desirability of these cost-sharing options would also depend on the extent to which reduced services would affect the health of beneficiaries.

The impact of increased cost-sharing on the level of federal spending would depend on two factors: the per capita costs paid by enrollees and the extent to which cost-sharing reduced the use of health care services. Together with any offsetting changes in benefits from other programs, these two factors would determine the size of reductions in expenditures by the federal government.

PLAN OF THE PAPER

Chapter II of this paper describes the current structure of Medicare benefits. It discusses the growth in those benefits, particularly in the areas that would be affected by changes in cost-sharing. The current pattern of health expenditures by the elderly is analyzed in Chapter III. Included are

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estimates of per capita Medicare benefits and enrollees' health care liabilities by income, age, and existence of other health coverage. Chapter IV discusses broad issues concerning increased cost-sharing and expanded catastrophic protection, with a particular emphasis on their likely effects on Medicare outlays. Finally, specific options for changing the benefit structure are analyzed and compared in Chapter V.

CHAPTER II. THE STRUCTURE AND GROWTH OF MEDICARE BENEFITS

Since its introduction in 1966, Medicare has played a large and growing role in supporting acute medical care for aged and disabled persons. This chapter describes current eligibility rules, the benefit structure, and sources of growth in Medicare benefits.

THE ELIGIBLE POPULATION

Those eligible for Medicare include persons 65 and over, disabled persons entitled to Social Security cash benefits for 24 consecutive months, and most persons with end-stage renal disease. In practice, however, participation varies between Part A and Part B.

Part A Hospital Insurance (HI) is available without charge to those eligible, including more than 95 percent of all elderly persons. In addition, persons 65 or over ineligible for automatic participation may purchase HI coverage--currently at a rate of $113 per month. Among the Social Security disability population, a smaller proportion receive Medicare HI coverage because of the two-year waiting period.

Part B Supplementary Medical Insurance (SMI) is available to the disabled who are eligible for HI and to almost all persons 65 or over. Participants must pay a monthly premium, however--or have it paid on their behalf by others. The monthly premium is currently $12.20. Not all persons who participate in HI purchase SMI coverage, however. In 1982, 99 percent of elderly HI participants were also enrolled in SMI, but only 92 percent of the disabled.

SERVICES COVERED BY MEDICARE

The Medicare program is largely confined to medical services that meet acute health care needs. HI covers short-term hospitalization, skilled nursing care, and home health services. SMI focuses on ambulatory care, including physician services, some laboratory fees, home health services, and outpatient hospital care.

HI Services

HI covers primarily hospital inpatient care. Beyond a required deductible--$304 in 1983--the first 60 days of hospitalization for a spell of illness are covered in full. Medicare directly reimburses hospitals (and other HI providers) according to the costs incurred for treatment of the Medicare enrollee. For each hospital day after that through day 90, a coinsurance payment of one-fourth of the deductible amount is charged. That is, in 1983, beneficiaries pay $76 per day for days 61 through 90. After 90 days of hospitalization, a beneficiary may draw on a one-time reserve of 60 days with a required payment of one-half the deductible amount for each such day.

In addition to short-stay hospitalization, HI also covers up to 100 post-hospital days in a skilled nursing facility (SNF). The beneficiary is liable for a coinsurance payment after 20 days of care, equal to 12.5 percent of the hospital deductible. To qualify for reimbursement, the beneficiary must have acute care needs.[1]

The last category of services covered by HI is home health care. Coverage is not subject to coinsurance but may only be provided by approved home health agencies. Relaxation on July 1, 1981, of some of the requirements for home health care is likely to result in an expansion in these agencies, and therefore in more use of these services over time.

SMI Services

After beneficiaries meet a $75 annual deductible, SMI pays 80 percent of "reasonable" charges for medical and health-related services and supplies, including payments to physicians, hospital outpatient facilities, and home health agencies.[2] Beneficiaries may, however, be liable for amounts in excess of 20 percent of allowed charges if physicians or suppliers refuse to

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1. The Tax Equity and Fiscal Responsibility Act of 1982 authorizes the Secretary of Health and Human Services to eliminate the three-day prior hospital stay requirement for SNFs at such time as he determines that such action will not lead to an increase in program costs, and will not change the acute care nature of the benefit.

2. "Reasonable" charges are the lowest of (1) the service provider's customary charge for the service, (2) the prevailing charge in the locality for similar services, or (3) the charge applicable for comparable services of the provider.

accept assignment--that is, refuse to accept the reasonable (allowed) charge amount as payment in full.[3]

Physician services (for care both in and out of hospitals) account for nearly three-fourths of all SMI outlays for benefits. Levels of allowed charges vary by specialty of physician, procedure performed, and locality.[4]

The next largest category--about 19 percent--of SMI reimbursements is for outpatient hospital care. Other medical services covered include medical supplies, drugs that cannot be self-administered, ambulance services, some therapy services, and home health care.

The mix of services for both HI and SMI varies considerably between aged and disabled enrollees. For example, the disabled population uses 28 percent more outpatient hospital services per capita than enrollees aged 65 and over. If end-stage renal disease beneficiaries were included as disabled, that figure would be even higher.

SERVICES NOT COVERED BY MEDICARE

The Medicare program is designed to cover the acute care needs of the elderly and disabled rather than provide a fully comprehensive range of medical services.[5] Consequently, a large portion of medical expenditures--particularly those made by the elderly--are outside the scope of Medicare. Altogether, Medicare paid 69 percent of the hospital and physician expenses of the elderly but only 44 percent of their total health expenditures in 1978.

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3. Refusal to accept assignment means that the provider bills the patient directly, at a level which may exceed the reasonable charge for that service. The beneficiary will then be reimbursed by Medicare at 80 percent of the allowed charge. Although such refusal allows physicians to bill patients for additional amounts, physicians may simply not wish to deal directly with Medicare. In calendar year 1981, these allowed charges were only 77 percent of the size of submitted charges on average.

4. Pathologists and radiologists who accepted assignment were reimbursed at 100 percent of the allowable charge between 1967 and 1982. That special treatment was repealed by the Tax Equity and Fiscal Responsibility Act of 1982.

5. Studies of total health care spending have not been conducted for the disabled. The disabled are probably less likely to be institutionalized than the elderly, but they may have similar drug and dental expenses.

Medicare reimbursement paid only 3 percent of all the elderly's nursing home care expenses, since this care is largely directed at long-term chronic illness and Medicare's skilled nursing benefit is restricted to acute care needs.[6] This is an important exclusion, since in 1978 nursing home care accounted for one-fourth of total health care expenditures on the elderly.

Outpatient drugs and dental services are also largely excluded from Medicare coverage. These two areas represented 9.3 percent of the elderly's total medical care expenditures in 1978, almost none of which was financed by Medicare.

THE SIZE AND GROWTH OF MEDICARE OUTLAYS

Reimbursements for all Medicare services totaled $49.2 billion in fiscal year 1982. HI, the larger program, accounted for $34.3 billion in reimbursements. Although SMI represented 30 percent of all Medicare reimbursements in 1982 (see Table 1), enrollees paid approximately one-fourth of the costs of SMI with their premiums. Taking these contributions into account would implicitly lower the net reimbursement figure for Medicare to $45.4 billion in 1982 and cause the share of net reimbursements accounted for by SMI to drop to $11.2 billion, which represents 25 percent of net total reimbursements.

The Medicare program has grown rapidly since fiscal year 1967 when total outlays were $3.4 billion (see Figure 2). Outlays for 1983 are expected to total $57.4 billion, and CBO projects that by 1988 they will be $112 billion.[7]

Factors contributing to this growth include:

- Rapid increases in the price of medical care;
- Expansion in the volume of services provided; and
- Increases in the number of enrollees.

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6. This does not imply, however, that the balance was paid by individuals. Medicaid, the health care program for low-income persons, paid for nearly 39 percent of such care.

7. The 1988 projection assumes no further changes in coverage of medical services.

TABLE 1. DISTRIBUTION OF MEDICARE BENEFITS BY SERVICES COVERED, FISCAL YEAR 1982

	Benefits (billions of dollars)	Percent of Total Benefits
Hospital Insurance	34.3	70
Inpatient hospital	32.7	67
Skilled nursing care	0.5	1
Home health care	1.2	2
Supplementary Medical Insurance	14.8	30
Physician services	10.7	22
Outpatient services	2.9	6
Radiology and pathology	0.6	1
Other medical services	0.6	1
Total Medicare Benefits	49.2	100

SOURCE: Budget of the U.S. Government, Appendix, 1984.

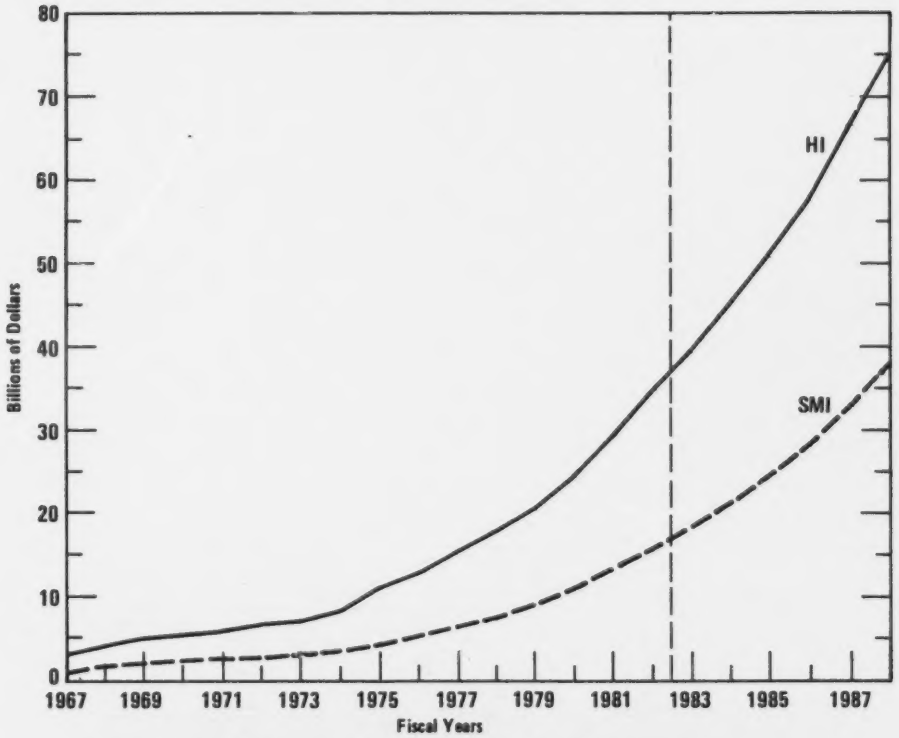
The most rapid component of growth has been in benefits per user, reflecting the combined effect of the first two factors. Moreover, both the number of services used and the price of medical care are likely to be affected by changes in the benefit structure of Medicare. It is important, therefore, to separate these two factors from the share of growth attributable to increases in the size of the enrollee population. Table 2 summarizes the average annual compound rates of growth of benefits and of the number of enrollees between 1978 and 1982.

Growth in Enrollees

The number of enrollees has expanded as the number of elderly has grown and as a result of adding disabled persons to the eligible population, although only a small part of total benefit growth is attributable to growth in enrollees. The number of elderly enrollees under both HI and SMI has increased at a rate of about 2.2 percent per year. Even more important has been the inclusion of disabled persons, beginning in fiscal year 1974. By

Figure 2.

Medicare Outlays for Hospital Insurance (HI) and Supplementary Medical Insurance (SMI)



SOURCES: Office of Management and Budget and Congressional Budget Office.

NOTE: Numbers for 1967-1982 are actual totals, whereas those for 1983-1988 are CBO estimates. Beginning with 1983, figures include the effects of the Tax Equity and Fiscal Responsibility Act of 1982 but assume no further changes in legislation through 1988.

1981, the number of disabled enrollees under HI had risen to over 3 million or 11 percent of all Medicare enrollees. Although disabled enrollees increased at an annual rate of 1.7 percent between 1978 and 1982, the number fell below 3 million in 1982 and is projected to remain fairly stable through 1988. Enrollee growth for the disabled under SMI has been higher.[8]

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8. This increase in SMI participation may have been stimulated by the lower relative contributions to the cost of care from SMI premiums, which have declined from 50 to 25 percent of the cost of SMI

TABLE 2. AVERAGE ANNUAL COMPOUND RATES OF GROWTH OF BENEFITS AND ENROLLEES, FISCAL YEARS 1978-1982 (In percent)

	Aged Enrollees	Disabled Enrollees[a]	All Enrollees
Hospital Insurance			
Total benefits	18.4	19.3	18.5
Number of enrollees	2.3	1.7	2.2
Proportion of enrollees receiving reimbursement	2.1	1.1	2.0
Benefits per user	13.4	16.1	13.7
Supplementary Medical Insurance			
Total benefits	20.7	24.0	21.2
Number of enrollees	2.3	2.2	2.2
Proportion of enrollees receiving reimbursement	2.9	2.0	2.9
Benefits per user	14.7	19.0	15.3

SOURCE: Budget of the U.S. Government, Appendix, 1979 and 1984.

a. These growth rates include persons with end-stage renal disease.

Growth in the Use of Services

Changes in the volume of medical services used by enrollees arise from several sources. Part of this increased use is attributable to the aging of the population. In 1966, 37 percent of elderly enrollees were 75 or older. That figure had increased to 41 percent by 1979. Older individuals progressively receive more Medicare services of all types, particularly

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coverage. This decline in contributions by enrollees has also resulted in an even more rapid increase in federal contributions than is indicated in Table 2, which shows gross rather than net reimbursements for SMI.

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hospital and skilled nursing care.[9] Even within each age category, however, the volume of services has been increasing. For example, for persons aged 65 to 66, rates of hospital discharge per 1,000 enrollees increased by 27 percent between 1967 and 1976. Finally, methods of treatment have changed, expanding the complexity or intensity of care so that enrollees of all ages receive additional medical services for many illnesses. This may result from use of more sophisticated procedures or simply from increased frequency of tests or physician visits, for example.

One indicator of increased use by enrollees is the percentage who receive reimbursed services in any year. In HI, this proportion has grown for elderly enrollees at an average rate of 2.1 percent per year since 1978. Use of HI services by disabled enrollees has grown by about half that rate. For inpatient hospital care, the number of all Medicare enrollees with a hospital stay increased from 19 percent in 1967 to 23 percent in 1978. Overall, the growth in the number of enrollees using SMI has been at a rate of 2.9 percent per year. Such growth may in part reflect the decline in the size of the deductible for SMI relative to medical care prices. That is, enrollees are now more likely to exceed the deductible, thereby qualifying for Medicare reimbursement.

Growth in Per Capita Costs

In general, costs of medical care have increased faster than the general rise in medical care prices, largely due to increases in intensity of care.[10] For example, between 1970 and 1982, hospital inpatient expenses increased at an average annual rate of 15 percent, 9 percentage points of which reflected increased input prices, 2 percentage points increases in admissions, and 3 percentage points increases in net intensity of care. To the extent that these findings would be similar for Medicare, increases in per capita benefits reflect both price increases and changes in the quantity of services consumed.

Quantity of care received is even more difficult to identify for SMI services, which have grown at an annual per capita rate of 18 percent

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9. A more comprehensive discussion of differences in Medicare use by age groups can be found in Chapter III.

10. Intensity represents a residual category of expenditures not accounted for by changes in input prices or--in the case of hospitals--admissions factors. Along with additional resources applied to patients' care, it may include changes in productivity, changing patterns of use, and errors in the measurement of input prices.

between 1974 and 1980. Since information on the number of specific types of services used is generally not available, it is difficult to determine the extent to which use has changed. Among the types of services provided, growth in outpatient hospital care has been particularly high. For example, the annual average compound rate of growth between 1974 and 1980 was 26 percent (see Table 3). For physician services for elderly enrollees, the rate of growth over the same period has averaged 16 percent.

TABLE 3. AVERAGE ANNUAL COMPOUND RATES OF GROWTH IN EXPENDITURES PER ENROLLEE BY TYPE OF MEDICARE SERVICES, 1974-1980 (In percent)

Type of Service	Annual Rate of Growth
Hospital Insurance	15.1
Inpatient hospital	15.2
Home health	27.3
Skilled nursing	4.0
Supplementary Medical Insurance	18.2
Physician services	15.6
Outpatient hospital	25.7
Independent laboratory	25.0
Home health	25.9
Other[a]	34.4
All Medicare	16.1

SOURCES: Health Care Financing Review (September 1982) and The Social Security Bulletin, Annual Statistical Supplement, 1981.

a. This category includes ancillary services, renal dialysis by limited care facilities, hospital-based physicians services, and other suppliers.

CHAPTER III. THE DISTRIBUTION OF MEDICAL CARE EXPENDITURES FOR THE ELDERLY

When considering options for revising the structure of benefits under Medicare, the question of how increased burdens would be spread across the enrolled population is particularly important since many of the enrollees have limited incomes. This chapter first examines who among the elderly spends how much for what medical services, and then focuses on Medicare-covered services to provide insight into how various options for revising the structure of benefits could be formulated to control the size of the added burden and its distribution.[1]

By 1984, it is projected that medical care expenditures for both Medicare-covered and noncovered services will total over 14 percent of the incomes of the noninstitutionalized elderly. Individuals are liable for about 37 percent of all these expenditures and for about 29 percent of the costs of Medicare-covered services. The pattern of these overall expenditures highlights both the absolute size of burdens on the elderly and the relative impact of changes in cost-sharing liability. These issues are analyzed in the first half of the chapter.

Medicare-related individual costs are currently more evenly distributed among all enrollees than are the reimbursement amounts for Medicare-covered services, largely because most costly hospital visits do not require substantial beneficiary cost-sharing. Even so, about 11 percent of elderly enrollees pay 36 percent of all Medicare-related individual costs and account for 78 percent of total reimbursements. If cost-sharing was to be increased proportionately in the same areas now subject to cost-sharing, the impact would reflect current patterns of beneficiary liability. It may be more instructive to examine how beneficiaries would be affected if reimbursement patterns were to change--that is, by adding cost-sharing for services for which the costs are now almost fully reimbursed, such as short hospital stays. Consequently, the second half of this chapter focuses both on current patterns of Medicare reimbursement and on Medicare-related

1. This chapter concentrates on the elderly rather than the disabled. Information is more readily available for the elderly, who represent 90 percent of Medicare enrollees. Appendix C contains a more detailed discussion of the patterns of health care use by the elderly. When patterns of expenditure vary substantially between these two groups, the differences are discussed in this chapter. Otherwise, specific results for the disabled are summarized in Appendix D.

enrollee costs in order to examine the potential impact of changes in the benefit structure.

The most recent data available for this analysis are from 1977 and 1978;[2] for purposes of illustration, however, the information presented will be expressed in 1984 dollars. Such adjustments are made because policy changes affecting the Medicare benefit structure are not likely to be implemented until fiscal year 1984 and because medical care prices have risen so rapidly since 1977. The results presented here, however, are only adjusted to reflect price and income changes, and thus implicitly assume that no change occurs in the structure of benefits and of medical expenditures between 1977 and 1984.[3]

OVERALL HEALTH CARE EXPENDITURES

Although Medicare plays an extremely important role in covering health care expenses for its elderly beneficiaries, reimbursements nonetheless account for less than half of the costs of their medical care. This is because of the large share of medical expenditures concentrated on non-acute care such as nursing home care.[4] In 1978, for example, Medicare paid

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2. It is difficult to provide a comprehensive picture of the health patterns of Medicare enrollees from any one source of data. Consequently two sources of data have been used here. The first, the Medicare History Sample, represents a summary of actual Medicare bill information. This large data source is longitudinal--allowing analysis of a five-year history of individual records--and is of sufficient size to focus on the larger users of Medicare services who constitute only a small proportion of all enrollees. On the other hand, it can only indirectly supply information about out-of-pocket expenses and has no information on incomes. The second data source, the National Medical Care Expenditure Survey, helps to fill these gaps. Its sample size is considerably smaller, but information is available for the entire range of medical expenditures, other sources of support for expenses, income, and other demographic information.

3. A more detailed description of these adjustments and some discussion of their limitations can be found in Appendix B.

4. Nursing homes in these estimates refer to all facilities that provide some level of nursing care. Homes certified by Medicare and Medicaid to provide skilled or intermediate care dominate the category, but a small proportion of homes providing only minimal nursing services are also included.

an estimated 44 percent of all health expenditures for the elderly. Medicaid contributed 14 percent and other public sources--such as Veterans Health Care--accounted for 6 percent.[5] Private sources, representing the remaining 36 percent, include individual out-of-pocket payments, private health insurance, and aid from charitable organizations. A more specific breakdown of private and public funding sources by type of care is shown in Table 4.

TABLE 4. DISTRIBUTION OF PER CAPITA HEALTH EXPENDITURES FOR THE ELDERLY BY TYPE OF EXPENDITURE AND SOURCE OF FUNDS, 1978

Type of Expenditure	Total in 1984 Dollars[a]	Percentage Distribution by Source of Funds		
		Private	Medicare	Other Public
Hospital Care	2,007	12	75	13
Physicians' Services	845	41	56	4
Nursing Home Care	1,197	54	3	43
Dentists' Services	131	97	--[b]	3
Drugs and Sundries	306	84	--[b]	16
Eyeglasses and Appliances	57	67	31	2
Other Health Services	137	46	31	23
Total	4,680	37	44	19

SOURCE: Charles R. Fisher, "Differences by Age Groups in Health Care Spending," Health Care Financing Review (Spring 1980), pp. 65-90.

a. These figures have been inflated to 1984 dollars based on projections of Medicare per capita outlays through 1984. Since the share of expenditures by type of service and source of payment remained relatively constant between 1970 and 1978, it was assumed that an inflator based on Medicare-covered services would reasonably approximate the increases in overall expenditures.

b. Less than 0.5 percent.

5. Preliminary figures for 1980 indicate that these proportions have remained relatively constant.

Medicare's contribution arises largely from hospital and physician reimbursements since its focus is on acute care. Medicare pays 69 percent of total expenditures in these two areas.[6] Only 3 percent of nursing home expenses are covered under Medicare, whereas Medicaid pays for nearly 40 percent of them. If nursing home care is excluded from the total estimate, Medicare pays for 58 percent of all other medical expenditures.

The introduction of Medicare substantially increased the share of expenses covered by the federal government, but it has not led to a major shift in the pattern of use of health care services by the elderly. Moreover, since its introduction, the federal government's share of financing for care has shifted very little. In 1965, before the introduction of Medicare and Medicaid, the share of expenditures paid from private sources was 70 percent. After dropping to 39 percent in 1970, the private share of such expenditures declined only slightly to about 37 percent in 1978. The composition of expenditures has also remained stable, with small increases in the proportion for hospital care (largely covered by Medicare) and for nursing home care (where the private contribution is greater than half).[7]

Differences in Health Expenditures by Income

Per capita expenditures for elderly Medicare enrollees from all sources vary among income classes. Figure 3 shows average per capita medical expenditures from all sources for noninstitutionalized elderly Medicare enrollees by income and Table 5 summarizes the distribution of income of the elderly.[8] Total expenditures generally decline as income increases.

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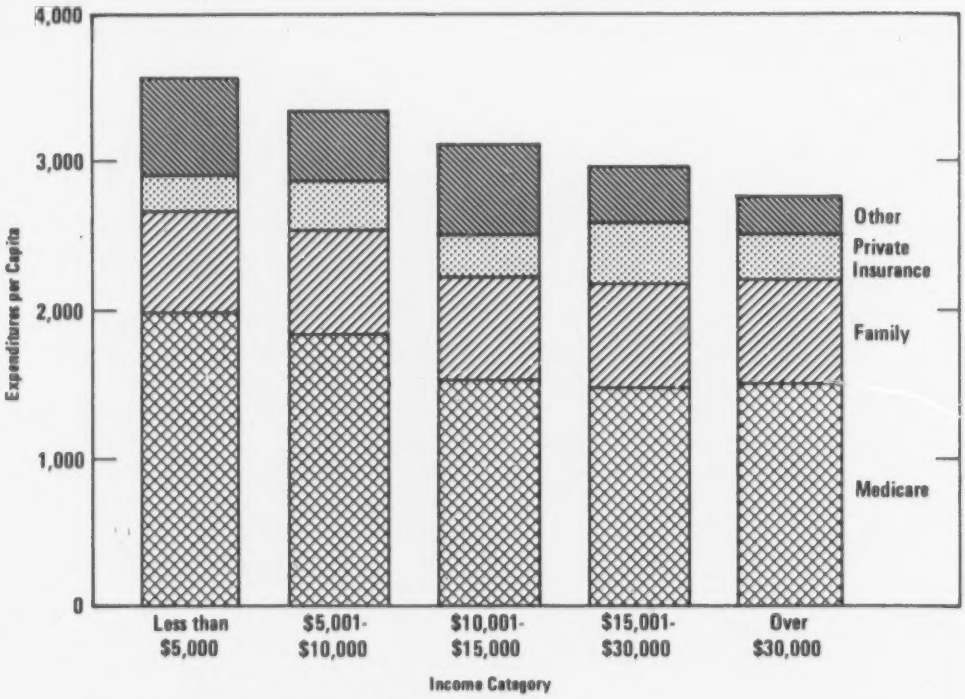
6. This figure could be contrasted with employer-provided coverage to private-sector workers in which over 80 percent of the cost of hospital care and physician services is covered on average. See Congressional Budget Office, Protection from Catastrophic Medical Expenses: The Effects of Limiting Family Liability Under Existing Employee Insurance Programs (August 1981).

7. If these trends continue, the share of expenditures paid by Medicare is not likely to go up.

8. It is important to note that a large portion of the elderly's medical expenses--the costs of nursing home care--is not captured in these data. Per capita expenditures are contrasted with family income. In families with more than one elderly individual, the total amount of health expenditures would be even higher.

Figure 3.

Annual per Capita Medical Expenditures for Elderly Noninstitutionalized Medicare Enrollees, by Source of Payment and Income (In 1984 dollars)



SOURCE: National Medical Care Expenditure Survey.

NOTE: The amounts shown here indicate payments for health care services. Consequently, the private insurance category consists of payments to providers from insurance companies and does not include premiums paid to insurance companies.

If expressed as a percentage of average income, the differences in medical expenditures would be even more pronounced. It is projected that by 1984 noninstitutionalized persons with household incomes under $5,000 will have medical expenditures totalling 97 percent of their $3,659 average income, 18 percent of which they must pay out-of-pocket. Those in the highest income category are expected to have expenditures representing less than 5 percent of their projected average income of $58,306 and will pay just over 1 percent out-of-pocket. Dollar amounts of Medicare reimbursement decline as income increases, except for those in the highest income group, mainly because of falling total expenditures. Private

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expenditures (paid either by the family out-of-pocket or by private insurance) as a percentage of total medical expenses increase with income, from a low of 26 percent in the bottom income class to more than 36 percent in the top two income categories. In absolute terms, however, this trend is less pronounced since there is a decline in total outlays as income increases. The "other payer" category is most important at lower income levels and is dominated by Medicaid reimbursements that cover about 10 percent of (the noninstitutional) medical expenses for those in the lowest income group.

TABLE 5. DISTRIBUTION OF NONINSTITUTIONALIZED ELDERLY ENROLLEES AND THEIR INCOME BY FAMILY INCOME CATEGORY, 1977 (In 1984 dollars)

Family Income Category	Percentage of Enrollees	Average Family Income
$5,000 and Less	12.6	3,659
$5,001 - $10,000	22.0	7,312
$10,001 - $15,000	19.4	12,334
$15,001 - $20,000	11.9	17,412
$20,001 - $30,000	14.7	24,503
$30,001 and Above	19.4	58,306
All Noninstitutionalized Elderly Enrollees	100.0	21,358

SOURCE: National Medical Care Expenditure Survey.

Individual Liability for Health Care Costs

To calculate a person's liability for health care, a somewhat different set of expenditures focusing on direct out-of-pocket health care costs and insurance premiums is relevant. Direct out-of-pocket costs are shown as family contributions in Figure 3. Individual liability also includes medical insurance premiums, since persons who use no medical care in a given year may still face considerable personal liability for the costs of insurance. Where a portion of such insurance is borne by another payer--

such as a former employer, as part of retirement benefits--only the portion paid by the enrollee should be considered part of the person's liability.[9]

The distribution of overall individual liability for the noninstitutionalized elderly increases with income except for those with family incomes above $30,000 (see Table 6). Family per capita expenditures on supplemental insurance and the proportion of individuals covered also rise with income--again with the exception of those in the highest income groups where coverage increases but premiums fall.[10]

If individual liability is expressed as a percentage of average income of families in each category, per capita liability ranges from 16 percent of family income for those with family incomes below $10,000 in 1984 to 2 percent for those in the highest income group. Average liability for all noninstitutionalized elderly is over 4 percent of family income. Moreover, this figure indicates that the noninstitutionalized elderly are directly liable, on average, for almost one-third of their total health care expenditures.[11]

Although no information is directly available on the coverage provided by private insurance plans, Medicare supplemental insurance--commonly referred to as "Medigap"--generally pays the coinsurance and deductible amounts under Medicare and sometimes also covers catastrophic hospital coverage. More comprehensive--and expensive--plans also cover other services not covered by Medicare, such as drugs. Private insurance for nursing home care is generally not available.

The importance of the existence of, and coverage provided by, private insurance for Medicare enrollees is the protection it offers against increased

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9. It may be that another household member actually pays these privately incurred costs. Since family rather than per capita income is used for this analysis, the problem is not severe.

10. As would be expected, average total individual liability is higher than the combined family and private insurance amounts reported for total medical expenditures in Figure 3. Costs of private insurance include administrative and selling costs, for example, in addition to the expected medical benefits.

11. This figure is difficult to estimate precisely, however, since overall expenditure figures are generally available only for medical expenses and do not adjust for the cost of insurance.

TABLE 6. AVERAGE INDIVIDUAL LIABILITY FOR MEDICAL CARE FOR NONINSTITUTIONALIZED ELDERLY MEDICARE ENROLLEES BY INCOME, 1977 (In 1984 dollars)

Family Income Category	Out-of-Pocket Medical Expenditures	Private Insurance: Percentage Purchasing Coverage	Private Insurance: Average Premium Per Covered Individual[a]	Total Individual Liability[b]
$5,000 and Less	670	28.6	396	784
$5,001 - $10,000	687	44.6	416	873
$10,001 - $15,000	693	50.5	440	915
$15,001 - $20,000	627	64.8	453	921
$20,001 - $30,000	748	69.9	472	1,077
$30,001 and Above	696	72.0	417	996
All Noninstitutionalized Elderly Enrollees	690	55.2	435	930

SOURCE: National Medical Care Expenditure Survey.

a. Insurance paid for by others is not included here.

b. Individual liability is the sum of out-of-pocket expenditures on medical care and the average per capita insurance premium (paid by the family) among all enrollees.

cost-sharing.[12] For the elderly population whose private insurance pays for Medicare deductibles and coinsurance, increased cost-sharing would raise the price of insurance (and therefore overall medical expenditures as well), but the insurance would protect them against extraordinary individual liability during a year of unusually high medical expenditures.

12. About 65 percent of the noninstitutionalized elderly are covered by private insurance. This figure is higher than that reported in Table 6 since it includes insurance paid for by others.

REIMBURSEMENT AND LIABILITY

To understand the potential impact on enrollees of changes in the benefit structure, it is important to consider two patterns of Medicare-related enrollee liability--not only the costs of Medicare-covered services not reimbursed by Medicare, but the pattern of Medicare reimbursement. On the one hand, the individual liability figures provide information on the potential impact of any benefit structure changes that would be consistent with the current pattern of coinsurance and deductibles. For example, a large portion of current Medicare liability arises from SMI coinsurance, and the effect of an increase in that coinsurance would follow closely the patterns of current liability. On the other hand, if hospital coinsurance--which is now very limited--was expanded, the pattern of Medicare reimbursement among enrollees would be a better indicator of who would be affected and by how much.

Medicare-Related Liability

Medicare-related enrollee liability is defined here as SMI premiums, and required deductible amounts and coinsurance for both HI and SMI paid by beneficiaries. For purposes of this discussion, added charges by physicians and other suppliers above Medicare-allowed charges will not be included--largely because of the difficulty in quantifying these charges. Medicare-related liability represents only a portion--approximately 40 percent--of total individual noninstitutional liability, which as described earlier includes both Medicare-related liability and costs to individuals for other noncovered services and for private health insurance.

The calculation of Medicare-related liabilities requires two steps. First, 1984 projections of the premium, deductible amounts, and coinsurance can be made from program data. Such amounts do not reflect what enrollees would be required to pay, however. Since Medicaid and private insurance provide coverage for many Medicare enrollees, a second adjustment is needed to reflect the influence of these programs. Medicaid generally would pay the Medicare-related liability for persons covered by both programs. For those with private insurance, the issue is more complicated.

If private insurance is paid by some other party such as a former employer, the enrollee will be largely protected against any increase in Medicare-related liability.[13] For those who purchase their own supple-

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13. This assumes that such insurance provides "first dollar" coverage that pays for Medicare deductibles and coinsurance.

mental coverage to pay the deductibles and coinsurance, an increase in such cost-sharing would raise their liability, possibly by something more than the average cost-sharing increase (through higher insurance premiums).[14] These persons would, however, benefit by being protected against any extraordinary increase in liability. That is, higher hospital coinsurance could substantially raise--perhaps by thousands of dollars--the liability of an uninsured person with a long hospital stay, while the increased liability of an insured person would be limited to approximately the average increase in costs for all covered persons, many of whom would not have a hospital stay in any given year.

For a few high-income elderly enrollees who do not have private insurance, some relief from catastrophic expenses is available through the medical deduction allowed in the calculation of federal income taxes. Since the incomes of the elderly are generally low and a large portion of these incomes--particularly Social Security benefits--are not subject to tax, most of the elderly cannot benefit from the medical deduction. Moreover, even for those claiming it, the tax benefits would be no more than half of the amount of catastrophic expenses. No attempt is made here to estimate such benefits.

Two estimates of Medicare-related liability are shown in Table 7, the first of which reflects the total average level of Medicare cost-sharing by income. The second set of figures adjusts for actual individual liability (after subtracting the contributions of other payers). Medicaid is assumed to reimburse recipients for all out-of-pocket costs related to Medicare-covered services. The adjustment for those with private insurance lowers the liability in proportion to the share of the insurance cost paid by the employer. The two averages in the table can be compared to illustrate the likely protection from liability for coinsurance and deductibles afforded by Medicaid and by insurance paid by others.[15] Since these are averages, no additional adjustment is made for purchase of private supplemental insurance.

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14. Indeed, since insurance companies add the costs of marketing and administering their programs to premium charges, costs to Medicare enrollees with private insurance of a rise in cost-sharing might be greater than that average increase.

15. The data used here are not sufficiently detailed to indicate, for example, actual types of care covered under private insurance and whether those with Medicaid coverage were eligible for the full period under study. Consequently, these results are illustrative only.

TABLE 7. AVERAGE MEDICARE-RELATED LIABILITY BY INCOME FOR NONINSTITUTIONALIZED ELDERLY ENROLLEES, 1977 (In 1984 dollars)

Family Income Category	Average Total Annual Cost-Sharing[a]	Average Medicare-Related Enrollee Liability[b]	
		In Dollars	As Percent of Income
$5,000 and Less	428	296	8.1
$5,001 - $10,000	503	396	5.4
$10,001 - $15,000	478	416	3.4
$15,001 - $20,000	424	386	2.2
$20,001 - $30,000	444	385	1.6
$30,001 and Above	431	377	0.6
All Noninstitutionalized Elderly Enrollees	457	381	1.8

SOURCE: Congressional Budget Office simulation from National Medical Care Expenditure Survey and Medicare History Sample.

a. Includes SMI premiums and Medicare deductibles and coinsurance.

b. Cost-sharing by enrollees after adjusting for payments by Medicaid and private insurance financed by other payors such as former employers.

Medicare cost-sharing for elderly noninstitutionalized enrollees is projected to average $457 in 1984, of which about $76 will be paid by someone other than the enrollee.[16] Payments from sources other

16. The figures estimated here are not directly comparable with those in Table 6 or Figure 3 since additional adjustments have been made here to make the projections from the National Medical Care Expenditure Survey compatible with program data. In addition, no allowance is made for the cost of insurance over and above the average beneficiary liability from cost-sharing--that is, for marketing and administrative costs.

than enrollees themselves are proportionately greater for those with incomes below $10,000, where Medicaid benefits are concentrated. Those in the lowest income categories will spend 8 percent of their projected incomes on Medicare-related liability, while elderly persons with family income in excess of $30,000 will devote less than 1 percent to such medical expenses.

Overall, just over 2 percent of all elderly enrollees are projected to have Medicare cost-sharing expenses in excess of $2,000 in 1984 (see Table 8). Almost three-quarters of the enrollees will incur cost-sharing amounts of less than $500. These figures are based on program data, however, that contain no information on private insurance coverage, since it is necessary to use program data based on a very large sample size to obtain reliable estimates of the distribution of these liabilities.[17]

Among the noninstitutionalized elderly population, high users of Medicare-covered services are not particularly more likely to have Medicaid or private insurance coverage. About 55 percent of all noninstitutionalized elderly Medicare enrollees purchased private insurance in 1978--a figure that is likely to have grown over the past five years. The percentage of the elderly population purchasing private insurance was lower--35 percent--for those reporting no medical expenditures, but relatively constant for persons at varying (but positive) levels of total medical expenditures.[18] For example, only 54 percent of those with medical expenditures in excess of $10,000 (in 1984 dollars) purchased private insurance. Over 61 percent of persons with medical expenses between $1,000 and $2,000 purchased insurance. The decision to purchase insurance is affected by income, attitudes, and other factors in addition to anticipated health status.[19]

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17. Moreover, this data set contains all enrollees and not just noninstutionalized persons. The institutionalized population may have a higher than average proportion of users with large cost-sharing liability.

18. Medical expenditures do not include payments for insurance coverage. Persons using no medical care may underreport coverage by insurance, however.

19. Little is known about the comprehensiveness of insurance protection or all the conditions under which insurance may not be available. In general, however, it appears that most of the elderly could purchase insurance, although there is sometimes a waiting period for coverage of pre-existing conditions.

TABLE 8. DISTRIBUTION OF ELDERLY ENROLLEES BY MEDICARE-RELATED COST-SHARING, 1978

Cost-Sharing Amounts[a] (in 1984 dollars)	Percent of Elderly Enrollees
Less than $300	51.4
$301 - $500	22.6
$501 - $1,000	14.6
$1,000 - $2,000	9.1
$2,001 - $3,000	1.3
$3,001 - $4,000	0.4
More than $4,000	0.4

SOURCE: Medicare History Sample.

a. The cost-sharing amounts include SMI premiums and all Medicare deductibles and coinsurance. The Medicare History Sample does not capture all SMI liability. For those who do not meet the deductible limit, it is not possible to estimate their Medicare liability precisely. Thus, $40--reflecting the missing data--has been added to each enrollee's liability. In addition, SMI charges above the allowable charge, and hospital costs after benefits have been exhausted, are not included.

Enrollee liability from SMI will represent nearly 80 percent of total Medicare cost-sharing in 1984--which will average $505 in 1984.[20] SMI coinsurance and deductible amounts for all elderly beneficiaries are projected to average $231 in 1984, and SMI premiums to be $172, while HI deductibles and coinsurance will average only $102. A more detailed description of these components of Medicare-related liability by age is contained in Appendix C.

20. This figure does not include any SMI charges in excess of the 20 percent of allowable charges that beneficiaries must pay. Nor does it include hospital costs after benefits have been exhausted. This average is higher than that for the noninstitutionalized elderly reported in Table 7, in part because of differences in enrollees included but also because the NMCES data used in Table 7 are not as inclusive.

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Reimbursement for Medicare-Covered Services

The pattern of reimbursement for Medicare-covered services strongly reflects hospital use. Since the required amounts for cost-sharing from hospital stays of fewer than 60 days per spell of illness are relatively low, reimbursements display a considerably different distribution than does Medicare-related cost-sharing.

Reimbursements were unevenly spread over the Medicare elderly population, with over two-fifths of enrollees receiving no reimbursed services (see Table 9).[21] Another 27 percent had reimbursements of less than $500 (expressed in 1984 dollars). Reimbursements at the upper end can be very high indeed; over 5 percent of recipients received services for which reimbursements were in excess of $10,000.

TABLE 9. DISTRIBUTION OF ELDERLY ENROLLEES BY REIMBURSEMENT LEVELS, 1978

Total Reimbursement (in 1984 dollars)	Percent of Elderly Enrollees[a]
$0	43.3[b]
$1 - $500	27.4
$501 - $1,000	6.5
$1,001 - $5,000	12.2
$5,001 - $10,000	5.4
$10,000 and Above	5.1

SOURCE: Medicare History Sample.

a. Sample is limited to those enrolled in both HI and SMI.

b. This percentage will be closer to 30 percent in 1984, since the proportion of enrollees exceeding the deductible will approach 70 percent.

21. Since 1978, however, the proportion of elderly qualifying for SMI reimbursements has risen to nearly 68 percent.

Average reimbursement for Medicare services declines steadily by income group except for those with 1984 incomes above $20,000 (see Table 10).[22] These differences in Medicare reimbursement are largely a result of differences in hospitalization, so the pattern is much more pronounced for HI, which is dominated by inpatient hospital services. Enrollees aged 80 and above have HI reimbursements twice as great as those for enrollees 65 through 69.

TABLE 10. AVERAGE MEDICARE REIMBURSEMENT PER ENROLLEE BY FAMILY INCOME CATEGORY, 1978 (In 1984 dollars)

Family Income Category	Medicare Reimbursement
$5,000 and Less	2,100
$5,001 - $10,000	1,978
$10,001 - $15,000	1,648
$15,001 - $20,000	1,540
$20,001 - $30,000	1,643
$30,001 and Above	1,639
All Noninstitutionalized Elderly Enrollees	1,763

SOURCE: National Medical Care Expenditure Survey.

Extraordinary Users of Medicare

About 11 percent of elderly Medicare enrollees had reimbursement in 1978 of $5,000 or more (in 1984 dollars). Altogether, reimbursement to these beneficiaries represented about three-fourths of all Medicare spending. Since increased cost-sharing for such persons could increase their liability substantially, options to expand cost-sharing might be designed with an upper limit. This would permit substantial increases in cost-sharing

22. The figures presented here are not strictly comparable to the averages in Table 5. Not only do they come from different data sources, but since it was not possible to disaggregate these averages by income into HI and SMI components, an average weighting factor had to be used instead of separate weights for HI and SMI as was done in Table 5.

while still protecting those who would otherwise be left with major burdens.[23]

Although average reimbursement for all enrollees was $1,773 per enrollee in 1978 (expressed in 1984 dollars), a small percentage of enrollees were much larger users: the top 11 percent of Medicare beneficiaries receiving reimbursed services averaged $12,600 in costs. In general, the beneficiary's share of costs was also very high for these individuals--averaging $1,675 in 1984 dollars.[24] The limited information available suggests that the combined effect of Medicaid and private insurance coverage is likely to protect about three-quarters of the high users of Medicare-covered services from extraordinary individual liability, however.

Characteristics of Users Incurring Large Costs. Enrollees using extensive Medicare-covered services are more likely to be older, have at least one period of hospitalization and to die during the year than are elderly enrollees in general. Although income data are not available for these large users, age may serve as a partial proxy for ability to absorb high out-of-pocket costs--at least for the elderly. For example, the average income of those aged 80 and above is only 81 percent of that for persons aged 65 through 69, implying that a disproportionate share of these high users of services also have limited incomes as compared to the general enrollee population.

As compared to all elderly enrollees in 1978, those with reimbursed services costing over $5,000 were older and more likely to have been hospitalized and to have died in that year (see Table 11). Almost all--98 percent--of these extensive users of medical care had at least one hospital stay, and 5 percent had a total of 60 days or more in a hospital in 1978.

In addition, over one-fifth of those with extensive use of Medicare-covered services in 1978 died during the year. Indeed, almost 14 percent of total 1978 Medicare reimbursements to the elderly were for the less than

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23. This is, of course, only partial protection since persons with high Medicare covered expenses may also have high expenses for other services such as drugs and nursing home care that would not be included in any limit.

24. This includes only cost-sharing on Medicare-covered services and therefore excludes the costs of hospital days once benefits have been exhausted.

TABLE 11. SELECTED CHARACTERISTICS OF ELDERLY ENROLLEES WITH HIGH AMOUNTS OF REIMBURSED MEDICARE SERVICES, 1978[a]

	Percent of Users Incurring High Costs	Percent of All Elderly Medicare Enrollees
Aged 75 Through 79	21.4	19.7
Aged 80 and Above	31.0	22.6
No Hospital Stay	1.9	79.6
Hospitalized More Than 60 Days in 1978	4.9	0.6
Died in 1978	12.4	2.6

SOURCE: Medicare History Sample.

a. Reimbursement amounts of $5,000 or more (in 1984 dollars).

3 percent of beneficiaries who died in that year.[25] In such cases, increases in cost-sharing for covered services--especially hospitalization--would affect the estates of decedent Medicare enrollees rather than being a direct burden on elderly beneficiaries themselves. On the other hand, the surviving relatives may also be elderly.

Medicare Use Over Time. Beneficiaries with the highest reimbursement amounts for Medicare services in 1978 were likely also to be extraordinary users of covered services in 1977, and to a lesser extent this relationship remains true for the entire 1974-1978 period. Thus, those with catastrophic expenses in any one year are likely to face even greater burdens over a period longer than a year. Only 4.1 percent of all elderly enrollees used services costing Medicare in excess of $10,000 in 1977 (in

25. Actually this figure understates the share of expenditures spent during the last year of a person's life, since for many only part of a year's expenses are included--for example, for an enrollee who died on February 1, these data reflect only one month's costs.

1984 dollars), but for those who incurred reimbursements in excess of $10,000 in 1978, 18.8 percent also had at least that level in 1977 (see Table 12). In 1974, the relationship is less strong, but those with the highest amounts of reimbursed services in 1978 were still 2.5 times more likely to have high reimbursements as were 1974 enrollees as a whole.

TABLE 12. DISTRIBUTION OF 1978 MEDICARE REIMBURSEMENTS FOR THE ELDERLY COMPARED WITH REIMBURSEMENTS FOR SAME PATIENTS IN 1974 AND 1977 (In percents)

Former Reimbursements (in 1984 dollars)	1978 Reimbursements (in 1984 dollars)				
	$0	$1-$5,000	$5,001-$10,000	$10,000 and Above	All Elderly
1977 Reimbursement					
$0	75.0	27.9	28.2	23.1	48.2
$1 - $5,000	22.0	61.4	50.9	47.1	42.8
$5,001 - $10,000	2.1	6.2	10.4	11.0	4.9
$10,001 and above	1.0	4.5	10.5	18.8	4.1
1974 Reimbursement					
$0	75.8	45.8	45.6	41.6	58.1
$1 - $5,000	20.1	45.5	41.2	41.6	34.4
$5,001 - $10,000	2.3	4.9	7.1	8.1	4.1
$10,001 and above	1.8	3.8	6.1	8.6	3.4

SOURCE: Medicare History Sample.

NOTE: For example, of those whose reimbursement in 1978 was $5,001-$10,000, 28.2 percent had a 1977 reimbursement of $0, 50.9 percent had a 1977 reimbursement of $1-$5,000, and so on. For that same 1978 reimbursement group ($5,001-$10,000), 45.6 percent of them had a reimbursement in 1974 of $0, 41.2 percent had a 1974 reimbursement of $1-$5,000, and so on.

CHAPTER IV. THE EFFECTS OF BENEFIT STRUCTURE CHANGES

This chapter considers some of the broad issues that would arise with most options to increase the share of Medicare costs paid by enrollees, and with other options to improve protection against catastrophic medical expenses. It discusses ways of deferring cost-sharing liability. Finally, it deals with the means-testing issue. Specific options and their effects are analyzed in Chapter V.

SOURCES OF FEDERAL SAVINGS FROM MEDICARE COST-SHARING

Increased cost-sharing would lower Medicare outlays, both from the direct effect of shifting liability onto beneficiaries and from the reduction in the use of Medicare-covered services that would likely result from these increased beneficiary costs. The magnitude of the impact from each source, however, would likely depend upon the way in which cost-sharing increases were structured.

The Direct Effect of Increased Cost-Sharing

A one-dollar increase in beneficiary payments as a result of cost-sharing would translate directly into a corresponding decrease in Medicare reimbursements. Total federal outlays might not decline by the full amount, however, if other federal programs--such as Medicaid--picked up some of the additional costs passed on to beneficiaries.

If cost-sharing was introduced only to provide these direct savings, the major issue would be what form of cost-sharing would best distribute the burden. Changes yielding equal savings could be obtained in more than one way--for example, by assessing hospital coinsurance in the early days of a stay or by increasing coinsurance on physician visits. Since the number of users of hospital services is much smaller in any year than the number of persons with reimbursed physician visits, the distributional effects of the two alternatives would be quite different.

In general, changes that would raise costs by a small amount for most Medicare beneficiaries might be favored over those that would concentrate the increase in costs upon a few. If so, cost-sharing increases would need to focus on deductible amounts or on SMI premiums. If the intent was to reduce the burden on low-income groups or the very old, the mix of

coinsurance and deductibles could be adjusted to avoid services heavily used by these groups. As noted in Chapter III, persons over 80 are more likely to have hospital stays than younger persons, and the distribution of medical use by income groups varies more dramatically for hospitalization than for physician visits. Increased hospital coinsurance would thus have a greater impact on the very old and on those with low incomes than would comparable increases in physician coinsurance.

Indirect Effects of Cost-Sharing Through Reduced Use of Medical Care

Additional reductions in outlays for Medicare could be achieved if cost-sharing operated to discourage use of covered medical services.[1] The desirability of such a decrease in the use of medical care depends upon the extent to which the health status of beneficiaries may be adversely affected.

As with most goods and services, a rise in the price of medical care is likely to reduce consumption. The extent to which this happens depends on the sensitivity of consumers to price changes. In the case of medical insurance, if patient liability rises from, say, 10 percent to 20 percent of charges, the effective price of the service to the patient will double.[2]

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1. In addition, some have argued that cost-sharing could be used to encourage patients to use lower-cost providers by requiring patients using such providers to pay a greater dollar amount of cost-sharing than those obtaining the same services from lower-cost providers. Such proposals have most frequently been made with regard to hospital stays. The recent passage of a prospective hospital reimbursement system has largely made such options superfluous, however. Since the purpose of the prospective hospital payment scheme is to encourage hospitals to bring their own costs into line with others, an indemnity plan permitting them to pass on costs to beneficiaries could dilute the incentives established by prospective reimbursement.

2. In the case of the elderly and disabled, it is important to consider not only the cost-sharing required by Medicare, but also the extent to which these enrollees also have private supplemental coverage that would alter the effective price. Much of the discussion that follows is based on Joseph P. Newhouse and others, Some Interim Results from a Controlled Trial of Cost-Sharing in Health Insurance (Santa Monica: Rand Corporation, January 1982). A more detailed presentation of these results can be found in Appendix E.

The Rand Study. The most comprehensive study of cost-sharing and health insurance to date is being conducted for the Department of Health and Human Services by the Rand Corporation. Like most studies on cost-sharing, this one excludes the elderly. Whether Medicare beneficiaries would respond in the same way as the younger population in the Rand study is not known. Moreover, no evidence is yet available--from this or any other study--as to the effect of changes in the use of medical services on patients' health.

Results from this experiment--which are just now becoming available--are consistent with earlier nonexperimental findings in this area: with only a few exceptions, price affects both the number of people using medical services and the number of ambulatory medical visits per user. At the lowest extreme, families facing 95 percent coinsurance spent only $254 on health care while those with free care (no coinsurance) spent $401. Even a 25 percent coinsurance plan resulted in family expenditures 14 percent less than that for free care. Finally, the Rand study found that coinsurance on physician visits has an important impact on hospital use. For families in the plan with 95 percent coinsurance on ambulatory services but free care for inpatient services, the probability of hospital admission was less than for families whose insurance fully paid for all types of care.[3]

Implications for Medicare Cost-Sharing. If persons 65 and over behave in the same manner as younger persons, the results from the Rand study suggest that increased cost-sharing under Medicare--particularly on physician services--would result in somewhat lower use of medical services than under the present benefit structure. An early study of the impact of Medicare on use of medical services found that such cost-sharing caused use to rise, particularly of short-stay hospital care.[4] However, the SMI portion of Medicare already has considerable cost-sharing, so that increases in it might have a relatively small effect. Moreover, the medical expenditures of young, nondisabled persons are quite different from those of Medicare beneficiaries, reflecting in part different preferences for consumption

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3. At first consideration this seems counterintuitive since one might suppose that families with free hospitalization but high coinsurance costs for outpatient care would attempt to substitute inpatient for outpatient services whenever possible. Rather, this finding suggests that it is the doctor who initiates hospitalization for a patient. If persons see doctors less as a result of high ambulatory coinsurance rates, this seems in itself to hold down hospital admissions, even if hospital care is "free."

4. See Regina Lowenstein, "Early Effects of Medicare on the Health Care of the Aged," Social Security Bulletin (April 1971), pp. 3-20.

of health care and perhaps less sensitivity of the aged to the price of such care. On the other hand, the lower income levels of the aged and disabled could make them more responsive to differences in the price of care.

It is likely that some changes in use would occur with any expansion of Medicare coinsurance or deductibles. The Rand study finding that coinsurance on physician visits has an important impact on probability of hospitalization suggests that this might be as effective in lowering hospital use as hospital coinsurance itself. Alternatively, cost-sharing could be kept relatively low on some services to encourage their use, perhaps as a substitute for more expensive care, while raising it on other services. This would follow from the belief that cost-sharing requirements may discourage persons from seeking preventative care or early treatment, thereby leading to greater long-run costs of care. In addition, cost-sharing could be coordinated to ensure that persons who choose low-cost care would not face higher out-of-pocket expenses than those who use a higher-cost alternative. Currently this approach is not always followed. For example, existing coinsurance on ambulatory (SMI) services may make tests in the hospital less expensive to the patient than those in a doctor's office.

The Role of Private Supplemental Health Insurance. Nearly two-thirds of the elderly and disabled currently have private supplemental insurance coverage--often referred to as "Medigap"--that pays a large share of the deductible and coinsurance costs of Medicare.[5] Medicaid, the other major public program, covers about 14 percent of Medicare enrollees.[6] Together, Medigap insurance and Medicaid protect three-fourths of the elderly and disabled against liability for cost-sharing of Medicare-covered services. Such coverage reduces the net price of a particular medical service to zero, thus defeating efforts to reduce medical care use by imposing higher out-of-pocket costs.

If enrollees continued to purchase such insurance after an increase in Medicare cost-sharing, much of the effect of such a change on use would be

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5. Such insurance may not always provide comprehensive coverage. A 1979 survey of Blue Cross-Blue Shield plans indicated, however, that even the inexpensive options tended to pay the deductible amounts and coinsurance, particularly for HI.

6. In addition to Medicaid, there may be other overlaps from programs such as veterans' health assistance. Veterans' health programs are used by only 1 percent of the elderly although that figure is likely to rise as World War II veterans increasingly take advantage of such services.

lost.[7] On the other hand, higher Medicare cost-sharing would result in larger premiums for Medigap insurance, which might discourage its purchase somewhat. Also, insurers might offer less comprehensive plans, thereby implicitly leaving some cost-sharing in place.

Since Medicare actually pays for much of the increased medical care use that results from private insurance coverage, the price of the private insurance does not fully reflect the costs of such higher use. That is, if private coverage of SMI coinsurance led to an increase in physician visits, for example, Medicare would be liable for 80 percent of the increased costs of that use. This could be rectified through a tax on insurance companies.[8]

Medicaid, which aids some low-income aged and disabled persons, has the same effect as private insurance in protecting some Medicare enrollees from cost-sharing liability. States now have the option of introducing some cost-sharing in Medicaid, but this is likely to be limited by concern about the low incomes of participants. As a joint federal-state program, however, some of the costs of increased use as well as of protection for patient liability would be borne by the federal government.

BENEFIT STRUCTURE CHANGES REDUCING BENEFICIARY LIABILITY

Some changes in Medicare coverage could be introduced that would limit beneficiary liability from increased cost-sharing but could still yield

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7. The limited empirical evidence available in this area suggests that this would indeed be the case. See, for example, Marjorie Smith Carroll and Ross H. Arnett III, "Private Health Insurance Plans in 1978 and 1979: A Review of Coverage, Enrollment and Financial Experience," Health Care Financing Review, vol. 3 (September 1981), pp. 55-87; and Stephen H. Long, Russell F. Settle, and Charles R. Link, "Who Bears the Burden of Medicare Cost Sharing," Inquiry, vol. 19 (Fall 1982), pp. 222-34.

8. If the tax was coordinated with imposition of additional cost-sharing, it could discourage some enrollees from purchasing first-dollar coverage, thereby retaining some of the incentives to use fewer Medicare services. It would also recover the costs of the additional services used by those who would continue to buy comprehensive private supplemental insurance. Since this paper is restricted to cost-sharing changes, such an option is not considered here. For more information, see Congressional Budget Office, Containing Medical Care Costs Through Market Forces (May 1982).

net savings in federal outlays. Under current law, Medicare's catastrophic protection is weak--both because coinsurance amounts may accumulate for those who use covered services extensively, and because of the gaps in coverage, particularly for nursing home care.

One element of many cost-sharing proposals is a ceiling or "cap" on patient liability for covered Medicare expenditures. Such a cap could protect patients from a hospital stay or from large physician bills that could wipe out much or all of a family's savings, particularly when proposals include increased hospital coinsurance. To the extent that the cap would provide catastrophic protection, beneficiaries might be better able to absorb modest increases in yearly medical costs. In any one year the elderly and disabled normally face only routine medical expenses, but may feel compelled to budget for the prospect of catastrophic bills in the event of long hospital or institutional stays.

In addition to an annual limit, a separate multiyear cap might also be introduced to protect those with high cumulative bills over a three- or five-year period, for example. Such a cap would presumably reflect an average annual limit of less than the yearly cap, recognizing that over a period of years high medical expenses could severely erode the resources of the elderly and disabled. An example would be a two-tiered cap of $3,000 for any one year but $5,000 over any three-year period (with some annual adjustment for inflation).

The chief disadvantage of such caps on liability are that they would substantially increase Medicare outlays--or, if combined with cost-sharing increases, result in considerably lower net savings. If a cap was set high enough to avoid this problem, it might not provide much protection for those with limited resources. Finally, a cap incorporating both HI and SMI cost-sharing would generate coordination problems. For example, allocating the effects of the limit across the two portions could be done in several ways, each of which would have differential impacts on the two trust funds.

BENEFIT STRUCTURE CHANGES DEFERRING BENEFICIARY LIABILITY

Another approach that would offer some protection against catastrophic expenditures would be to allow Medicare enrollees to defer Medicare-related costs until after their deaths. Medicare could temporarily pay the increased cost-sharing, and after their deaths obtain payment from their estates. The liability could be deferred until the death of both spouses and any dependents, and be specifically limited to the value of the estate. Such an approach would be similar to the property tax deferrals that some states offer elderly homeowners.

Either mandatory or voluntary deferral would be possible.[9] A mandatory deferral coupled with increased cost-sharing, would defer all increases in patient liability. At death, those whose estates were small would pay none of the cost-sharing. Such an approach implicitly assesses greater liability against those with greater resources.[10] A voluntary deferral could be combined with expanded coverage, say for nursing home care, paid by the estates of beneficiaries.

A deferral option could maintain more of the federal savings from greater cost-sharing than a simple cap on cost-sharing. That is, while a cap essentially eliminates additional liability, at least part of deferred cost-sharing would eventually be recovered. Moreover, such an approach would implicitly allow beneficiaries to spread the cost of one year's extraordinary medical care costs over time.

Many practical problems arise, however, with a deferral option. Some enrollees might transfer assets to relatives to limit the size of their estates--and hence the share of the deferred cost-sharing that could be recovered by the Medicare program.[11] To minimize this, relatives could be held liable for deferred liability up to the amount of assets received within a given period before those medical expenses were incurred.

An additional difficulty with deferral options arises because a large share of the out-of-pocket costs of the elderly occur in the last year of life. During that period, a patient may not be capable of making decisions about the nature of medical care received. Instead, relatives of the patient are likely to be directing that care. If increased care would result in claims on the enrollee's estate, relatives would have an incentive to choose less care in order to enhance the value of the estate. Whatever their response, a decision in the patient's interest would be made more difficult by the deferral provision.

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9. With current data, it is not possible to estimate the effects such options would have on beneficiaries or the potential savings to the federal government. Consequently, this approach is only treated in general terms here, and is not included in the specific options discussed in Chapter V.

10. Specific options for means-testing are discussed in the next section.

11. Similar problems have arisen with Medicaid, in which initial eligibility depends on the level of assets--thereby giving applicants an incentive to transfer assets to relatives rather than use them to pay for expenses such as nursing home care. Medicaid now requires applicants to wait two years before becoming eligible if they have given assets to relatives for the purpose of becoming Medicaid-eligible.

THE ROLE OF MEANS-TESTING

Another approach to cost-sharing would be to make receipt of benefits conditional upon income (or some other measure of economic resources), or to structure benefits differentially for persons at various levels of income. So far, Medicare benefits have not been means-tested.[12] Such a change would represent a major philosophical shift in this program.

Medicare: A Benefit or Social Insurance Program?

One of the primary concerns in evaluating means-testing as an option for Medicare is the question whether this program is to be viewed as a benefit or an insurance program. If it is purely a social insurance program, many would argue that benefits should be available equally to all eligible enrollees on the ground that coverage is generally limited to those who have paid into the Social Security system for many years (or on whose behalf someone has paid).

The structure of Medicare, however, implies that it may not be purely a social insurance program. Social Security taxes now place a contribution equal to 2.6 percent of taxable payroll in the Medicare trust fund, earmarked for HI benefits.[13] These contributions have only been made since 1966, however, and payment of benefits to the aged and disabled far outstrip the actuarial value of their contributions into the system. Moreover, the level of contributions made is not tied directly to the amount of benefits received. Although each year new enrollees have a longer history of contributions, the rate of return on such payments is projected to remain very high. For example, an elderly couple each reaching age 65 in 1982, of whom one spouse had average covered earnings over the 1966 to 1982 period, would have paid in $2,200. The present value of their future lifetime benefits is projected to be $63,000--28.6 times the contribution.[14]

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12. Many aged and disabled enrollees are also served by the Medicaid program. Consequently, some analysts argue that this eliminates any need for means-testing Medicare. But Medicaid benefits vary considerably by state, and in general are limited to the very poor.

13. The 2.6 percent is the combined employer-employee contribution. For self-employed individuals, the figure is 1.3 percent in 1983.

14. This estimate is based on 1982 Alternative II-B assumptions as contained in the Annual Report of the Board of Trustees of the HI trust fund. The return to a couple both working would be lower. Moreover, contributions will rise over time as people pay in for longer than the 17 years in this example.

SMI has less claim to being social insurance, particularly for the elderly. It receives no payroll tax contributions, and any elderly person can participate regardless of Social Security elgibility. SMI premiums currently pay for only 25 percent of program costs, so it could be considered largely a benefit program.

The Rationale for Means-Testing Medicare Benefits

If benefits under Medicare were restructured to reduce federal outlays, some form of means-testing might distribute the burden so as to alleviate the impact on those with modest incomes. For example, hospital coinsurance could be raised in the early days of a hospital stay but by more for those with higher incomes. Small savings from the low-income group would be offset by greater savings from those with higher incomes. While raising beneficiary liability by an average of $500 per year might be considered unacceptable for elderly or disabled beneficiaries with low incomes, it would seem more reasonable for those with incomes of, say, $20,000 per year.

Such changes might even be viewed as providing additional protection to low-income persons, rather than as denying coverage to high-income enrollees. For example, increased hospital or physician coinsurance could be combined with a cap on the out-of-pocket liability of low-income beneficiaries.[15] Similarly, since SMI benefits are subsidized out of general revenues and are unrelated to Social Security trust funds, it might be reasonable to lower this subsidy (by raising the premium) to those with high levels of resources.

Problems with Means-Testing

Aside from the general criticism that means-testing would change the social insurance nature of Medicare, many of the other objections to such an option center on the practical problems associated with implementing it--the need to define and measure resources appropriately and then to develop a viable structure for a means test. Most of these issues are common to all means-tested programs, however, so they do not necessarily preclude the implementation of means-testing under Medicare.

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15. Although a few high-income enrollees might be able to obtain additional catastrophic protection through the medical deduction provided by the personal income tax, the number of such enrollees would be very small.

Defining Resources. Since the goal of means-testing is to distinguish among enrollees according to their ability to bear a greater share of medical costs, it is necessary to use a measure of "means" that captures all of the economic resources available to enrollees. The usual measure is income--defined as periodic receipts in the form of wages, salaries, interest, dividends, rent, pensions, annuities, and cash benefits such as Supplemental Security Income (SSI) or Social Security. This measure of income captures most of the flows of resources into a household during a year. It may not, however, fully reflect ability to purchase medical care.

An important source of ability to purchase medical care is the asset holdings of a family in the form of savings, securities, or ownership of a home. Such assets are particularly important for the elderly--more than 70 percent of whom own homes and over two-thirds of whom have income from liquid assets. Families with equal levels of income may have very different levels of assets--and hence different resources from which to draw for medical care. The form of the assets may also matter. A $100,000 fully owned home is less liquid than $100,000 in a savings account. It might be necessary, therefore, to add a separate asset test in conjunction with the income test as many existing means-tested programs do.

In addition, families with equal incomes and assets may not be alike in terms of the demands, both medical and otherwise, placed on their resources. Families of different size face different expenditure needs for food and housing. Moreover, for an elderly couple, large medical bills for one spouse are more difficult to pay if the other also has high medical expenses.

Measuring Resources. Every additional complication in the definition of resources adds to the intrusiveness and expense of means-testing. The simpler the definition, the more likely that the means test can be uniformly applied--and the more likely that it will fail to distinguish well among those with different abilities to pay medical bills.

The goal of a simple definition of economic resources or "well-being" can best be met by a measure that corresponds to other commonly used definitions. For example, income reported for tax purposes to the Internal Revenue Service is such a measure, although it varies substantially from a comprehensive measure of income. In the case of the elderly and disabled, the largest source of difference is likely to be Social Security, other transfer payments or pension benefits excluded from taxable income, and other tax-free investment income. These exclusions substantially understate income for Medicare beneficiaries; indeed, many of the aged do not file federal income tax forms since they owe no tax.

A means test could be developed based on adjusted gross income from the income tax form, or perhaps adjusted gross income plus Social Security and other untaxed income. Another possibility would be to use the more complicated reporting required for participation in SSI. Any measure chosen, however, is likely to treat some portion of the elderly and disabled differently from another. For example, using adjusted gross income plus cash transfer payments--thereby ignoring the value of assets--would apply the same out-of-pocket medical costs to persons with high levels of wealth as to those with equal income but no assets. Moreover, since the definition would normally be based on the previous year's income, additional distortions would likely arise.

Establishing a Structure for the Means Test. Some means tests (such as that for Medicaid) establish a dollar level below which benefits are available and above which they are not. In other cases, the cutoff point is phased in to avoid problems of discontinuity in benefits around the cutoff. For Medicare, means-testing could be implemented as differential amounts of coinsurance or deductibles. Alternatively, a cap on total liability could be imposed differentially, depending upon income level.

The simplest approach would be to use only one or two cutoff points, although this would necessarily create discrepancies in coverage between those just above and just below a cutoff. If the difference in benefits was great, persons with high expenses just above the cutoff could be worse off than persons just below the threshold. Using several cutoffs would allow slower gradations of benefits and reduce the discrepancies. A further refinement would be to set the cutoff as a percentage of the defined level of resources, so that it would vary continuously with a measure of income.

On the other hand, with only one or two cutoffs, a means-test could be further simplified by making it voluntary. That is, persons could be subject to the highest level of cost-sharing unless they applied for a lower rate that would require verification of income (and perhaps assets) below a certain limit. In this way, only persons applying for the preferential rate would have to be certified. Those with resources above the established limit (or who chose not to apply) would not need to reveal their incomes. The voluntary principle could also be applied if the liability limit was phased in gradually above the initial resource cutoff.

In fact, such a scheme could be implemented outside the Medicare program entirely, technically avoiding the issue of means-testing Medicare benefits. Medicaid currently provides protection for some very-low-income persons through its medically needy program. That could be expanded to

cap patient liability for moderate-income elderly and disabled, although such an approach would require a number of complicated changes.[16]

Finally, the higher the liability cutoff, the lower would be the total federal savings generated from cost-sharing. If the first cutoff was set relatively high, say at $20,000 of income, the use of a means test might be less controversial. Since many of the elderly and disabled have relatively low incomes, however, a high cutoff would also substantially reduce the federal savings generated. For example, it is projected that by 1984 only 32 percent of the elderly will be in families with incomes over $20,000. Moreover, as shown in Chapter III, use of medical care is lower on average for those in the highest income categories so that savings generated would be less than proportional to the size of the affected group.

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16. For example, some major restructuring of Medicaid would be necessary since it is administered by the states and one portion of Medicaid--the medically needy program--is provided at their discretion. Currently, 29 states have programs for the medically needy.

CHAPTER V. OPTIONS FOR RESTRUCTURING MEDICARE BENEFITS

This chapter presents specific options for changing the structure of Medicare benefits. They would affect different groups of Medicare enrollees, distribute the burden in different ways, and generate varying amounts of total federal savings. Some changes would generate savings through increased cost-sharing by enrollees. Others would protect enrollees from excessively high costs as a result of catastrophic illness.

The description of each set of options briefly outlines some of the advantages and disadvantages of concentrating on that specific area of cost-sharing. It shows how individual elderly enrollees would be affected by increases in cost-sharing--that is, how much the actual premiums, coinsurance, and deductible amounts would rise under various options--and to what extent enrollees would be cushioned by benefits from Medicaid or private insurance (other than that purchased by the family).[1] The last section of the chapter presents the federal savings from each option.

RAISING PREMIUMS

Broadly defined, an increase in the SMI premium or the introduction of an HI premium could be considered an increase in cost-sharing. The chief effect would be to raise costs evenly across enrollees, unless the increase was so great as to discourage people from purchasing such coverage.

Raising the SMI Premium

Current SMI premiums cover 25 percent of program costs for aged enrollees. If they were increased enough to cover 35 percent of the costs, premiums would rise to $20.00 per month on January 1, 1984, rather than $14.30 as is now projected. The premium would be adjusted again the following January to maintain the 35 percent share. Except for those who now forgo SMI coverage and enrollees whose premiums are paid for them by Medicaid,[2] costs would rise by $68 in calendar year 1984.

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1. This latter adjustment is consistent with the adjustment used to estimate individual liability for the elderly in Chapter III.

2. Medicaid recipients who are eligible because of SSI participation generally have their SMI premiums paid by Medicaid, while many of the medically needy do not.

This option would result in the most even distribution of increased costs among enrollees of all the options discussed in this chapter, and would not raise costs substantially for those already facing large medical bills. Inevitably it would place a greater burden on low- and moderate-income enrollees than on high-income enrollees. Moreover, it would not generate indirect savings by reducing the use of medical care.

Introducing a Premium for HI

Under current law, those eligible for coverage under HI pay no premium even though the average benefits they receive are much greater than their contributions during their working years. Cost-sharing based on the use of services would be concentrated on a minority of enrollees since only about one-fourth of them use HI-covered services in a given year.

Additional enrollee contributions could be obtained through the imposition of a monthly HI premium of $10 beginning January 1, 1984, and increasing each January at the same rate as the HI deductible amount. Enrollees would pay $120 in calendar year 1984--representing less than 10 percent of average per capita HI reimbursements for the elderly.

Like the SMI premium, the costs of greater cost-sharing would thus be spread across all enrollees rather than concentrated on those who face periods of hospitalization or institutional care. The latter already pay considerable cost-sharing--from SMI and from HI deductibles and coinsurance.

INCREASING THE SMI DEDUCTIBLE AMOUNT

Another relatively simple change in Medicare's benefit structure would be to increase the deductible amount for SMI services. Like changes in the SMI premium, increases in the SMI deductible amount would be spread over a broad range of the covered population.

The deductible amount for SMI has only been increased twice since Medicare began serving beneficiaries in 1966. First set at $50 per year, it is now 50 percent higher ($75 per year). Between 1967 and 1980, however, average per capita reimbursements for the elderly under SMI grew 328 percent and even household income more than doubled over the period.

Increasing the SMI deductible to $100 on January 1, 1984, and indexing it thereafter to the rate of growth of per capita SMI reimbursements would raise average Medicare cost-sharing for the elderly by about $13 in calendar year 1984. This would be unlikely to reduce participation in SMI. The

nearly 70 percent of beneficiaries who now exceed the deductible would pay all or part of the additional $20.[3] While, as with the increased SMI premium, the absolute increase would be similar for all beneficiaries, this option would have the greatest relative impact on those with the lowest incomes (who are not also covered by Medicaid).

CHANGING COINSURANCE

Changes in coinsurance could be introduced in Medicare by raising the share of costs paid by beneficiaries on services that have coinsurance, and by extending coinsurance to areas that currently require no patient cost-sharing. The options presented in this section consider such changes for only one category of medical care at a time in order to focus on the impact of each. Combinations of changes are considered in the next section.

SMI Coinsurance

At present, SMI enrollees must pay 20 percent coinsurance for all SMI covered services except home health care. This is the largest source of beneficiary liability for Medicare-covered services.[4] If no changes in the benefit structure were to occur in 1984, SMI coinsurance would represent about 80 percent of average Medicare cost-sharing liability for the elderly and disabled. Hence increasing SMI coinsurance could be expected to have a significant impact on Medicare outlays--the more so since, as discussed in Chapter IV, use of medical services of all types may be sensitive to increased coinsurance on physicians' services.

Increasing the coinsurance rate to 25 percent would raise average per capita beneficiary cost-sharing by $40 for the elderly and $54 for the disabled. For the approximately 70 percent of enrollees who now pay coinsurance, the added costs would not substantially change the distribution

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3. Since beneficiaries pay 20 percent of all reasonable charges, they would already pay $5 of the $25 difference in the deductible that would result if it were raised to $100.

4. Additional charges assessed by physicians on Medicare enrollees may actually be higher. In 1975, physicians' unassigned claims were estimated to average about two-thirds of the amount of physician coinsurance paid by the elderly. Since that time, the size of submitted charges relative to allowed charges has grown, although these submitted charges do not necessarily reflect what patients pay on unassigned claims.

of beneficiaries by level of Medicare cost-sharing (see Table 13).[5] They would, however, tend to shift enrollees at all levels into slightly higher cost-sharing categories.

When these increases are calculated by income group, there is little consistent variation. Those with incomes under $5,000 would pay a little less, on average, than those with higher incomes, if the liability was adjusted to reflect the contribution of Medicaid coverage.

Hospital Coinsurance

Although Medicare currently assesses coinsurance on hospitalization, these charges do not go into effect until the sixty-first covered day of a particular benefit period. About 0.6 percent of enrollees pay coinsurance in any year. For those who do pay, however, the costs can be very high.

The hospital coinsurance options discussed here would change the period for assessing deductibles and coinsurance from a "spell of illness" to an annual basis. The deductible would be assessed on the first day of a hospital stay in any given year, and coinsurance days would be calculated on the annual total regardless of number of stays. That is, the deductible and coinsurance assessments would be identical for two beneficiaries with equal numbers of covered days in the hospital but with unequal numbers of stays.[6] Such a change would protect beneficiaries from liability for more than one hospital deductible or set of coinsurance charges in any given year. Moreover, enrollees would know with more certainty what their liability would be. On the other hand, those with multiple hospital stays in December and January would be assessed the deductible twice.

Two hospital coinsurance options, both of which would replace current coinsurance and begin January 1, 1984, are considered here. The first option would assess a coinsurance rate on each hospital day (after the first day, which is subject to the deductible) of 10 percent of the deductible amount. The second option would limit that coinsurance to 29 days. That is, after

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5. Data for the disabled, and additional results for the elderly, are presented in Appendix F.

6. The average increase in cost-sharing required of beneficiaries would change little if this was the only adjustment in coverage. For individuals, however, differences would arise since some enrollees with hospital stays now pay no deductible in a given year while others (with multiple benefit periods) pay more than once.

TABLE 13. THE DISTRIBUTION OF ENROLLEES BY LEVEL OF MEDICARE COST-SHARING UNDER CURRENT LAW AND FOR THREE COINSURANCE OPTIONS (In percents and 1984 dollars)

Amount of Total Medicare Cost-Sharing	Current Law	25 Percent SMI Coinsurance	Full 10 Percent Hospital Coinsurance	10 Percent Hospital Coinsurance on Days 2-30
Percentage of Enrollees in Each Category				
$0 - $300	51.4	50.1	51.4	51.4
$301 - $500	22.6	21.9	22.4	22.4
$501 - $1,000	14.6	14.9	9.7	9.7
$1,001 - $2,000	9.1	10.1	11.4	11.7
$2,001 - $3,000	1.3	1.9	3.1	3.5
$3,001 - $4,000	0.4	0.6	1.0	0.8
More than $4,000	0.4	0.5	0.9	0.4
Average Increased Cost-Sharing				
Average Increase in Cost-Sharing for All Enrollees	--[a]	40	72	52
Average Increase for Those Whose Cost-Sharing Rises	--[a]	58	443	375
(Percent of enrollees experiencing increases)	--[a]	(70.0)	(19.8)	(19.5)
Average Decrease for Those Whose Cost-Sharing Falls	--[a]	0	-2,137	-2,119
(Percent of enrollees experiencing decreases)	--[a]	(0)	(0.8)	(1.0)

SOURCE: Congressional Budget Office simulations from the Medicare History Sample.

a. Not appropriate.

the first 30 days of hospitalization in any year, no additional hospital cost-sharing would be required. For 1984, the 10 percent coinsurance amount would be approximately $35 per day (assuming no change in the calculation of the deductible amount) and could be expected to have some effect on the use of hospital services by those without Medicaid or private insurance.

While few persons are currently subject to coinsurance, the relatively high charges that are assessed in such circumstances would result in an important offset in savings even under the full 10 percent coinsurance option. For a person hospitalized for 150 days in 1984 (and assuming the beneficiary has not used any lifetime reserve days), the deductible and coinsurance under the full 10 percent option would total $5,597 compared to $13,552 under the current benefit structure. Moreover, this excludes the impact of the changes on hospital days not now covered because benefits have been exhausted. The estimates presented in the chapter do include an adjustment for those exhausted days.[7] The more restricted option of cost-sharing for only the first 30 days would cost that beneficiary only $1,373. In this case, however, those facing lower cost-sharing might expand their use of medical services.

Placing a limit on the number of days subject to coinsurance would restrict the average increase in cost-sharing to $52 as compared to $72 under the full 10 percent option (see Table 13).[8] When this average is further disaggregated to show the mean increase for those whose cost-sharing rises and the mean decrease for those whose cost-sharing falls, the source of the difference in the two options is even clearer. The limited 10 percent hospital coinsurance would lower overall Medicare cost-sharing for the small number of beneficiaries now paying coinsurance (on days 61 through 150) by an average of $913 or by $2,119 if days that were now uncovered are included.

Under both hospital coinsurance options, those with out-of-pocket costs below $300 would be unaffected, while those with higher liabilities would be more likely to face increased costs as compared with current law (see Table 13). The full 10 percent option would almost double the number of enrollees with Medicare cost-sharing in excess of $2,000. Other beneficiaries, with more moderate costs under current law, would also move

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7. This figure would be very large for a small number of beneficiaries since each hospital day would cost about $376 on average. Across all enrollees, it is estimated that the cost of such coverage would average about $12 per day.

8. These estimates are based on the 1978 distribution of hospital days, and are consequently somewhat low relative to 1984 projections.

into higher liability categories. The restricted 10 percent option, on the other hand, would reduce the liabilities of enrollees in the very highest category, since they would no longer face the coinsurance that now begins after 60 days. The increased costs under this option would occur for those in the mid-range of current liability levels.

Since hospital use displays a declining--but somewhat inconsistent--pattern at higher income levels, increased individual liability for the full 10 percent coinsurance option would fall somewhat less heavily on those with incomes over $30,000. Changes among income categories would be smaller than changes within a particular income group.

COMBINING COST-SHARING OPTIONS

Up to this point various options for cost-sharing have been presented separately. Some of them could be combined to achieve greater savings, a more even distribution of the burden, and improved coordination of cost-sharing. Some coordination of changes might be necessary to achieve a balance in the use of different types of services, since each change would affect incentives to use specific services. For example, higher coinsurance on skilled nursing facilities could discourage beneficiaries from moving out of inpatient hospital care to a skilled nursing facility unless hospital coinsurance was also increased. Other changes might have offsetting effects. For instance, if SMI coinsurance rates were raised, an increase in SMI premiums tied to a share of total costs would be less than if SMI benefits remained the same. Thus the changes discussed here are not necessarily additive.

For illustrative purposes, three combinations will be considered:

- A combination of 10 percent hospital coinsurance on days 2 through 30 of a year's hospitalization and an increase in SMI premiums to cover 35 percent of costs;

- A combination of 10 percent hospital coinsurance with an increase in SMI coinsurance to 25 percent; and

- A combination of 10 percent hospital coinsurance, 5 percent skilled nursing facility (SNF) coinsurance, and coinsurance on home health of 10 percent of the charge for each visit.

The hospital coinsurance and SMI components of these three options are based on changes already discussed in more detail earlier in this chapter. In the first of these combinations, hospital coinsurance of 10 percent of the deductible amount would be applied only on days 2 through 30 of hospital

stays in a calendar year. In the other two options, no upper bound would be placed on the number of days. The SMI increase would be tied to the average costs for an aged enrollee.

The third option would introduce two changes not previously discussed, which would affect skilled nursing and home health benefits. The skilled nursing coinsurance change is analogous to the hospital coinsurance options already considered; coinsurance would be assessed on each covered day (rather than only after 20 days), but at a lower 5 percent of the hospital deductible amount (compared to the current 12.5 percent rate). Coinsurance on home health visits would also be added and set at 10 percent of the charge for each visit. Currently, no cost-sharing is required for home health care.

The first combined option would increase cost-sharing by more than the other two alternatives, although its effects would be the most evenly distributed (see Table 14). Persons who currently pay hospital coinsurance as a result of extended periods of hospitalization would be considerably better off than under the current structure, where their HI liability can be very high. The average reduction for such beneficiaries would be $2,343 per year--but only a small proportion of beneficiaries would have a decline in cost-sharing.

The combination of hospital and SMI coinsurance changes (combination option 2) would also increase average Medicare cost-sharing substantially, since these cost-sharing changes would affect 96 percent of all Medicare reimbursed services. Since high users of HI services are also likely to have high SMI expenses, cost-sharing for those with hospital stays would increase dramatically under this option. As indicated in Table 14, the proportion of the elderly with cost-sharing in excess of $3,000 would almost triple. Those with hospital stays of at least 20 days would have an average increase in cost-sharing of $911 for example.

The third combination option would increase the number of beneficiaries with cost-sharing under $300 and over $1,000, compared to current law. The hospital coinsurance change would largely be responsible for increased cost-sharing at the upper end. The increase in beneficiaries at the bottom of the distribution would result because some beneficiaries would pay lower coinsurance on SNF benefits and some of those who receive SNF care have low levels of other types of cost-sharing liability. Although SNF coinsurance would be extended to all 100 days, the lower daily amount ($17.60 versus $44 in 1984) would mean that a person hospitalized all 100 allowable days would pay only about half as much in coinsurance under this option. This lower SNF coinsurance was chosen for the combination option since SNF care is less expensive than short-stay hospital care and the coinsurance for such hospital stays would be 10 percent (rather than the 25

TABLE 14. THE DISTRIBUTION OF ENROLLEES BY LEVEL OF MEDICARE COST-SHARING UNDER CURRENT LAW AND FOR THREE COMBINATION OPTIONS (In percent and 1984 dollars)

Amount of Total Medicare Cost-Sharing	Current Law	Hospital Coinsurance and Increased SMI Premium[a]	10 Percent Hospital Coinsurance and 25 Percent SMI Coinsurance[a]	Coinsurance Changes on Hospitals, SNFs, and Home Health[a]
Percentage of Enrollees in Each Category				
$0 - $300	51.4	42.2	50.1	55.9
$301 - $500	22.6	27.3	21.7	19.1
$501 - $1,000	14.6	12.8	10.8	8.5
$1,001 - $2,000	9.1	12.6	11.4	11.4
$2,001 - $3,000	1.3	3.9	3.7	3.1
$3,001 - $4,000	0.4	0.8	1.2	1.1
More than $4,000	0.4	0.4	1.1	0.9
Average Increased Cost-Sharing				
Average Increase in Cost-Sharing for All Enrollees	--[b]	120	112	74
Average Increase for Those Whose Cost-Sharing Rises	--[b]	142	183	444
(Percent of enrollees experiencing increases)	--[b]	(99.1)	(69.5)	(20.4)
Average Decrease for Those Whose Cost-Sharing Falls	--[b]	-2,343	-3,313	-2,003
(Percent of enrollees experiencing decreases)	--[b]	(0.9)	(0.5)	(0.8)

SOURCE: Congressional Budget Office simulations from the Medicare History Sample.

a. See text for a more detailed definition of the option.
b. Not appropriate.

or 50 percent now in effect for extended stays). To maintain the incentive for persons to move out of hospitals and into SNF facilities whenever feasible, it would be important to ensure that out-of-pocket costs to patients are lower for SNFs.

COMBINING MEDICARE COST-SHARING WITH IMPROVED CATASTROPHIC PROTECTION

Increases in Medicare cost-sharing could place large burdens on some beneficiaries. Particularly in the case of hospital coinsurance, even a modest daily charge added to the present system could result in very high liability for the small minority of patients with extended hospital stays--and who have no supplemental protection. Placing a cap on such liability would protect them from catastrophic charges, thus alleviating one major concern about increased cost-sharing.

Once such a limit was reached, however, patients would have access to additional services at no cost. For these patients, the impact of coinsurance would be lost. Moreover, if the limits were set at a relatively low level, a large portion of the direct federal savings would also be lost. Finally, for persons who purchase private supplemental insurance coverage, limits on liability would lower their insurance premiums (by lowering the insurance company's risk), but would not increase protection against extraordinary expenses. The number of beneficiaries above some cost-sharing limit (in excess of $2,000) would be small under any circumstances, and if only the privately uninsured were of concern the proportion of affected beneficiaries would be even smaller. Consequently, the cost of a cap per affected beneficiary would be very high.

Separate SMI and HI Limits on Patient Liability

Since the SMI and HI portions of Medicare are administered separately, one approach would be to place separate limits on the cost-sharing liability generated by each. This could lower the administrative costs of such a cap. But the separate caps would have to be higher, when added together, than one combined limit in order to achieve the same level of savings. Some individual beneficiaries would consequently be worse off than under a combined cap while others would gain.

Alternatively, since much of the dispersion in cost-sharing liability is attributable to those with long hospital stays, the imposition of a cap could be limited to HI cost-sharing, particularly if the only other benefit change was in the structure of hospital coinsurance. The HI limit could be lower than a limit on both HI and SMI, recognizing the potentially high SMI costs.

Placing a limit on the number of hospital days subject to coinsurance (as discussed earlier in this chapter) implicitly acts as such a cap for most HI services. The small number of enrollees receiving SNF care means that few persons would reach a cap of, say, $1,500 from SNF services alone. At the projected coinsurance of $44 per day in 1984, the maximum coinsurance payable would be $3,520.

On the other hand, Medicare participants with extended hospital stays often have unusually high SMI expenses as well--even in excess of any physicians' services charged specifically during a hospital stay. The relatively high 20 percent coinsurance on SMI services would mean that total cost-sharing expenses would remain very high for beneficiaries reaching the limit on HI liability.

Limits on Total Medicare Cost-Sharing

The effect of an overall limit on HI and SMI cost-sharing would depend on the level of that limit and on what other changes were made in the deductible amounts and coinsurance.[9] Table 15 summarizes the average per capita cost-sharing increases for elderly enrollees from four possible cost-sharing limits, when combined with the option of 10 percent hospital coinsurance beginning the second day of a hospital stay.[10] The limits range between $1,000 and $4,000. Below the applicable limits, the distribution of beneficiaries would be the same as for the full 10 percent hospital coinsurance option (see Table 13). The imposition of a $2,000 limit, for example, would move the 5 percent of elderly enrollees who would otherwise exceed that limit down into the top of the $1,000 to $2,000 bracket (see Table 13).

Elderly enrollees would, on average, have a decrease in cost-sharing liability of $81 with a $1,000 cap and 10 percent hospital coinsurance. At a limit of $1,000, about one-sixth of all elderly enrollees would be subject to the cap. The savings to such individuals would be high enough to result in a

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9. In this analysis, cost-sharing is assumed to include SMI premiums as well as all Medicare coinsurance and deductible amounts. It excludes, however, any estimate of additional liability to beneficiaries from the costs of excess charges not allowed under SMI.

10. As described earlier in this chapter, the coinsurance would be 10 percent of the deductible amount; this deductible would continue to be assessed on the first hospital stay in any year; and the current coinsurance on days 60 through 150 would be eliminated.

TABLE 15. EFFECT OF 10 PERCENT HOSPITAL COINSURANCE ON ELDERLY ENROLLEES UNDER VARIOUS COST-SHARING LIMITS (In percents and 1984 dollars)

	Options Including 10 Percent Hospital Coinsurance and Limits of:				
	$1,000	$2,000	$3,000	$4,000	No Limit
Percentage of Elderly Enrollees Subject to the Limit	16.4	5.0	1.9	0.9	--
Average Increase in Cost-Sharing Over Current Law	-81	15	46	59	72
Average Increase for Those Whose Cost-Sharing Rises	143	314	389	420	443
(Percent of enrollees experiencing increases)	(9.7)	(17.9)	(19.1)	(19.5)	(19.8)
Average Decrease for Those Whose Cost-Sharing Falls[a]	-841	-1,542	-2,013	-2,316	-2,137
(Percent of enrollees experiencing decreases)[a]	(11.3)	(2.7)	(1.4)	(1.0)	(0.8)

SOURCE: Congressional Budget Office simulations from the Medicare History Sample.

a. The decreases shown here generally average smaller the lower the limit because additional numbers of enrollees are affected and their smaller decreases in cost-sharing lower the overall average.

decrease in average cost-sharing as compared to current law. By 1984, over 11 percent of beneficiaries would have cost-sharing in excess of $1,000 even with no changes in current law.

At $2,000, the average cost-sharing increase from the hospital coinsurance option would drop by almost 80 percent as compared to the no-limit option--from $72 to $15. In fact, this limit would actually result in higher per capita reimbursements for the disabled than if no changes (in coinsurance) were implemented since average cost-sharing for the disabled is already quite high. At higher limits, more of the federal savings would be retained. Even with a $4,000 limit, however, per capita liability would only be 82 percent as high as if there were no limit, even though fewer than 1 percent of beneficiaries would be affected.

The effect of the limits is highlighted even more dramatically by focusing on the average for those whose cost-sharing would increase. Moving from a $1,000 limit to a $2,000 limit would more than double the average increase in cost-sharing for affected beneficiaries. The increase would be much smaller, however, between a $3,000 and a $4,000 limit.

If there was no limit on the cost-sharing, fewer than 1 percent of enrollees would face a decline in cost-sharing liability. These would be the enrollees who would be subject to hospital coinsurance under current law. The introduction of limits would increase substantially the number of elderly beneficiaries experiencing declines in Medicare-related cost-sharing. This would result from eliminating both high coinsurance after 60 hospital days and high cost-sharing expenses from combined HI and SMI use.

The increases in liability do not vary consistently by income category. The relative impact of these caps would, of course, be greater for those with incomes under $10,000. That is, even a $2,000 cap on cost-sharing liability might still result in a substantial burden for those with low or moderate incomes who faced high medical expenses and had no private insurance.

Limits Based on Income

In order to achieve both relatively low cost-sharing limits for those with low incomes and substantial federal savings from the cost-sharing increase, limits could be varied by level of income. For purposes of illustration, the first option considered here would place a $2,000 limit on cost-sharing for enrollees with 1983 family incomes below $20,000, and a $4,000 limit for those with incomes above $22,000. For those with family incomes between $20,000 and $22,000, the liability limit would rise (above $2,000) by one dollar for every dollar in income in excess of $20,000. This

would allow a phase-in of the changes in cost-sharing liability, thereby eliminating problems with discontinuity of benefits. The second option would similarly establish limits between $1,500 and $3,000, again with the initial cutoff at $20,000 of family income.[11] For simplicity, the standard definition of income is used with no adjustment for other resources or differences in family size. Approximately 68 percent of the noninstitutionalized elderly would have incomes below $20,000 in 1983.

Among all elderly enrollees cost-sharing would rise by an average of $29 for the first option and by $10 in the second case. Under both these options, this increase in cost-sharing liability would be higher, on average, for those with incomes over $20,000 in 1984 than for those with lower incomes. Some beneficiaries in the lower income groups would likely have cost-sharing liabilities representing a substantial share of their family income even if the cap was set at $1,500, however.

FEDERAL SAVINGS

With one exception, all of the specific options discussed in this chapter would result in federal outlay savings in 1984 and beyond (see Table 16). The savings would not, however, correspond directly to the estimated increases in per capita cost-sharing for elderly enrollees described in the earlier sections of this chapter. Disabled beneficiaries would have different amounts of per capita increases. Moreover, adjustments must be made for Medicaid offsets and changes in behavior induced by higher coinsurance and deductibles.

As discussed in Chapter IV, the behavioral changes that could be expected under Medicare from changes in the benefit structure are relatively small because, for about 70 percent of the beneficiaries, Medicare's coinsurance and deductibles are covered through Medicaid and private supplemental insurance. These indirect effects would vary considerably among the options. Some of the benefit structure changes--such as limits on total cost-sharing liability--could even stimulate increased use of medical services.

The highest five-year savings would be generated by two of the combination options and the introduction of an HI premium. Even these options generate five-year savings of less than $30 billion, however, and would make only a minor contribution to solving the financing problems facing HI. The second combination--SMI and hospital coinsurance increases--

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11. In this case, the maximum $3,000 limit would begin for those with incomes at $21,500 and above.

TABLE 16. FEDERAL OUTLAY SAVINGS FROM OPTIONS CHANGING THE MEDICARE BENEFIT STRUCTURE, FISCAL YEARS 1984-1988 (In billions of dollars)[a]

Option[b]	1984	1985	1986	1987	1988	5-Year Total
SMI Premium Increase	1.4	2.1	2.7	3.7	4.8	14.8
HI Premium	2.5	3.6	4.1	4.8	5.4	20.3
SMI Deductible Increase	0.2	0.5	0.8	1.1	1.5	4.1
SMI Coinsurance of 25%	0.6	1.3	1.6	1.9	2.2	7.7
Hospital Coinsurance of 10% of Deductible	1.7	2.9	3.4	3.9	4.4	16.2
With $1,000 limit	-1.9	-3.4	-3.9	-4.5	-5.1	-18.8
With $2,000 limit	0.3	0.5	0.5	0.6	0.7	2.6
With $3,000 limit	1.0	1.8	2.1	2.4	2.7	9.9
With $4,000 limit	1.3	2.3	2.7	3.1	3.5	13.0
With $2,000 limit for those with incomes below $20,000; rising thereafter to $4,000	0.6	1.0	1.2	1.3	1.5	5.5
With $1,500 limit for those with incomes below $20,000; rising thereafter to $3,000	0.1	0.2	0.2	0.3	0.3	1.1
Hospital Coinsurance of 10% of Deductible Days 2-30	1.2	2.1	2.5	2.8	3.2	11.9
Combination Option 1	2.6	4.2	5.2	6.5	8.0	26.5
Combination Option 2	2.3	4.2	5.0	5.8	6.6	23.9
Combination Option 3	1.8	3.2	3.7	4.2	4.8	17.7

SOURCE: Congressional Budget Office simulation from Medicare History Sample.

a. Savings in each of these options are estimated independently of any other change and hence the various options usually cannot be added.

b. For detailed descriptions of these options, see the text.

would produce a greater proportion of its savings indirectly through lower use of both SMI and hospital services. The first combination includes an increase in the SMI premium, which would not affect behavior.

Changes in the SMI deductible amount would generate low federal savings. The option as defined here would increase cost-sharing by only a small amount for each affected beneficiary. The option is of particular interest since it bridges the gap between a premium increase--affecting all beneficiaries--and greater coinsurance that would place proportionately greater costs on the high users of care. Deductible changes affect only the users of care, but by a limited amount.

Savings from three of the options would be quite comparable in 1984--ranging from $1.2 to $1.4 billion. These options are the increase in the SMI premium, the limited change in hospital coinsurance, and hospital coinsurance with a $4,000 cap on cost-sharing. They would do so, however, at the expense of different groups within the population. The SMI premium would affect all enrollees, while both hospital coinsurance options would raise costs to only about one-quarter of all enrollees.

Finally, it is interesting to compare the changes in federal savings under the various cost-sharing limits. Savings would increase substantially--by $0.7 billion--between the $2,000 and $3,000 limits, but moving the limit out further to $4,000 would generate only an additional $300 million in federal savings in fiscal year 1984. Since the limited hospital coinsurance option also implicitly represents a type of cap, it is notable that a combined cap would have to be set at over $4,000 to result in equivalent savings.

APPENDIXES

APPENDIX A. THE STATUS OF THE HOSPITAL INSURANCE TRUST FUND

The estimates in Table A-1 show a negative balance in the HI trust fund by the end of 1988. For 1985 and beyond, the estimates assume that the payment rates created under the newly passed hospital reimbursement plan will be updated each year so as to maintain the same level of stringency as would have occurred had limits in TEFRA been extended.

TABLE A-1. PROJECTIONS OF HOSPITAL INSURANCE TRUST FUND BALANCES IF TEFRA REIMBURSEMENT LIMITS ARE EXTENDED (By calendar year, in billions of dollars)

	Outlays[a]	Income[b]	Annual Surplus (Excluding Any Negative Interest)	Year-End Balance
1985	50.9	49.5	-1.4	6.0
1986	57.1	56.4	-0.6	5.4
1987	64.3	60.3	-4.0	1.4
1988	72.3	63.9	-8.2	-7.0
1989	81.3	67.5	-12.8	-20.8
1990	91.5	70.9	-18.3	-41.4
1991	102.9	74.0	-24.9	-70.3
1992	115.6	76.5	-32.5	-109.3
1993	129.9	78.6	-41.3	-160.5
1994	146.0	80.1	-51.4	-226.5
1995	164.2	80.4	-63.2	-310.3

SOURCE: Preliminary CBO estimates.

NOTE: Minus signs denote deficits.

a. Assumes hospital payment rates set so as to result in the same reductions in reimbursements as would have occurred if TEFRA had been extended (about 9 percent).

b. Income to the trust funds is budget authority. It includes payroll tax receipts, interest on balances, and certain general fund transfers. In years when balances are negative, income includes negative interest, which is the amount that would be paid by the trust fund on hypothetical borrowings required to continue benefit payments.

APPENDIX B. METHODOLOGY AND DATA

As noted in Chapter III, data on health care use by individuals are only available for 1977-1978. To make such information comparable to 1984, it was necessary to inflate medical expenditures. The inflators used for HI and SMI were based on actual 1977 and 1978 benefits per enrollee and on CBO projections for 1984. Separate inflators were used for the elderly and disabled. In several cases, overall medical expenditures were also projected for the elderly, using as an inflator the weighted average of the HI and SMI inflators.

Four other adjustments were made to the data, particularly relating to the estimates presented in Chapter V. First, a greater proportion of Medicare enrollees exceeded the SMI deductible in 1982 than was the case in 1978.[1] Since the program data from the Medicare History Sample contain no information on those with expenditures below the deductible, an arbitrary adjustment was used to simulate their expenditures. Second, the National Medical Care Expenditure Survey (NMCES) implicitly understates SMI reimbursements for the elderly, so it was adjusted to conform more closely to 1977 aggregate figures.[2] Third, while the distribution of hospital stays seems to be quite consistent with more recent data, the total hospital days projected for 1984 are understated in the sample used. Consequently, the savings estimates were adjusted upward to reflect the greater number of days, but the distribution of hospital days by individuals were not adjusted.

For the elderly, some of the tables in Chapters III and V disaggregate medical expenditures by income category, expressed in 1984 dollars. The Consumer Price Index (CPI) was used to inflate incomes for the elderly since a large share of the income of this group is directly tied to increases in the CPI.

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1. This is probably due in large part to the fact that the deductible has not kept pace with the rise in health care prices.

2. The NMCES was not established for the purpose of calculating SMI reimbursements, so the categories of health care defined in the survey do not directly correspond to SMI coverage.

APPENDIX C. PATTERNS OF HEALTH CARE USE BY THE ELDERLY

This appendix provides some additional information on the specific patterns of use of hospital care and physician services by elderly beneficiaries. Hospital use, which dominates the HI portion, varies the most by age and income. In contrast, visits to physicians are more uniformly distributed across the aged population.

The variations in these two major parts of Medicare coverage are reflected in the differences in HI and SMI reimbursements (see Table C-1). Average Medicare reimbursements by age group are of interest since such breakdowns reflect differences in health status. The older the beneficiary, the more likely he or she is to experience health problems. Differences in Medicare reimbursement by age are largely a result of differences in hospitalization. The pattern of reimbursement by age is much more pronounced for HI, which is dominated by inpatient hospital services. Reimbursements are more than twice as great for enrollees aged 80 and above as for enrollees 65 through 69. Moreover, if physician reimbursement--the largest component of SMI--is calculated for those who did not have any inpatient hospital stays in 1978, the amounts are nearly equal among all age groups.

TABLE C-1. AVERAGE MEDICARE REIMBURSEMENT PER ENROLLEE BY AGE, 1978 (In 1984 dollars)

Age of Enrollee	HI[a]	SMI[a]	Total[a]
65-69	885	517	1,402
70-74	995	559	1,554
75-79	1,238	592	1,830
80 and Above	1,781	704	2,485
All Elderly Enrollees	1,186	587	1,773

SOURCE: Medicare History Sample.

a. Sample is limited to those enrolled in both HI and SMI.

HOSPITAL USE

Just over 20 percent of all elderly enrollees had a hospital stay in 1978. Variations in hospital use are extremely sensitive to the age of the enrollee. Among those over 65, the older the enrollee the more likely he or she is to have a hospital stay and the longer that average stay will be (see Table C-2).

TABLE C-2. PATTERNS OF HOSPITALIZATION FOR MEDICARE ENROLLEES BY AGE, 1978

Age	Percent with at Least One Hospital Stay	Average Covered Days of Care Received for Those with at Least One Stay
65-69	16.2	14.9
70-74	18.3	14.7
75-79	22.0	15.7
80 and Above	27.6	17.8
All Elderly Enrollees	20.5	15.2

SOURCE: Medicare History Sample.

Hospital use shows little variation by income level except for the approximately 10 percent of persons with incomes above $30,000 (in 1984 dollars). For them, use and length of stay are shorter. The results shown here are controlled for age as well as income because these two variables interact (see Table C-3). Since the very old tend to have lower incomes and higher hospital use, some of the differences attributable to age differences would otherwise appear to be correlated with income. For those under 75, hospital use is greater in the middle-income ranges, while older persons' hospital use is highest in the bottom two income categories.

These results imply that the burden of expanded hospital coinsurance would fall disportionately on those over 75 with low and moderate incomes. On average, about one-and-one-half times as many of those enrollees had in excess of 20 nights in a hospital over the course of a year than their younger counterparts. Moreover, the burden of any change in out-of-pocket costs tied to number of hospital days would be concentrated among a small percentage of total beneficiaries.

TABLE C-3. HOSPITAL STAYS AND USE BY AGE GROUP AND INCOME LEVEL FOR NONINSTITUTIONALIZED ELDERLY MEDICARE ENROLLEES, 1977 (In percents)

Age Group and Income Level (1984 dollars)	Persons With at Least One Hospital Stay	Persons With More Than 10 Hospital Nights	Persons With More Than 20 Hospital Nights
65 through 74	17.5	7.6	3.9
$5,000 and less	15.4	9.0	4.7
$5,001 - 10,000	20.2	8.4	4.6
$10,001 - 15,000	17.5	5.9	3.3
$15,001 - 20,000	14.7	6.7	4.1
$20,001 - 30,000	21.1	8.9	4.5
$30,001 and above	14.8	7.2	3.0
75 and Above	22.9	12.0	6.8
$5,000 and less	21.9	11.7	7.2
$5,001 - 10,000	26.0	14.4	6.6
$10,001 - 15,000	25.8	13.1	8.0
$15,001 - 20,000	21.8	12.8	7.1
$20,001 - 30,000	20.6	8.9	6.9
$30,001 and above	18.8	9.7	4.8
All Noninstitutionalized Elderly Enrollees	19.6	9.3	5.0

SOURCE: National Medical Care Expenditure Survey.

PHYSICIAN SERVICES

Among elderly Medicare beneficiaries, there is little variation in use of physicians' services, which represent the largest portion of SMI (see Table C-4). This finding is consistent with the overall average level of SMI benefits described earlier. Visits vary with age, but not in a consistent fashion. Those aged 75 to 79 had the highest average number of visits.

TABLE C-4. PHYSICIAN VISITS OF NONINSTITUTIONALIZED ELDERLY MEDICARE ENROLLEES BY AGE, 1977

Age	Average Number of Physician Visits	Percent of Enrollees With More Than 10 Visits
65-69	5.8	17.7
70-74	5.9	16.0
75-79	6.6	21.0
80 and Above	6.1	18.6
All Noninstututionalized Elderly Enrollees	6.0	18.0

SOURCE: National Medical Care Expenditure Survey.

When similar comparisons are made by income class (expressed in 1984 dollars), physician visits for elderly Medicare enrollees are lowest at either extreme (see Table C-5). Enrollees with incomes above $30,000 display the lowest rates. In part, this reflects the fact that, among the elderly, higher-income families are those with wage and salary income, and earners are more likely to be healthy. In general, physician visits are much more evenly distributed across beneficiaries than are hospital days and stays, as is indicated by the proportion of enrollees with more than ten physician visits (see Tables C-4 and C-5).

TABLE C-5. PHYSICIAN VISITS OF NONINSTITUTIONALIZED ELDERLY MEDICARE ENROLLEES BY INCOME CATEGORY, 1977

Family Income Category (1984 dollars)	Average Number of Physician Visits	Percent of Enrollees with More Than 10 Visits
$5,000 and Less	6.1	19.3
$5,001 - $10,000	6.7	20.4
$10,001 - $15,000	6.2	16.9
$15,001 - $20,000	5.8	16.3
$20,001 - $30,000	5.9	18.3
$30,001 and Above	5.5	17.1
All Noninstitutionalized Elderly Enrollees	6.0	18.1

SOURCE: National Medical Care Expenditure Survey.

APPENDIX D. PATTERNS OF HEALTH CARE USE BY THE DISABLED

On average, the disabled are higher users of Medicare-covered services than are elderly beneficiaries. The average reimbursement for the disabled is projected to be $2,136 in 1984 (see Table D-1). The discrepancy in use is greater for SMI services than for HI.

It is projected that the disabled will average $588 in Medicare-related cost-sharing in 1984, of which $467 will be for SMI premiums, deductible amounts, and coinsurance. These averages are higher than for the elderly, although only by 16 percent overall. The proportion of beneficiaries in the highest cost-sharing category (over $4,000) is twice as high as for the elderly, although both figures are very small (see Table D-3).

TABLE D-1. AVERAGE MEDICARE REIMBURSEMENT PER DISABLED ENROLLEE BY AGE, 1978 (In 1984 dollars)

Age of Enrollee	HI[a]	SMI[a]	Total[a]
Less than 45	1,017	669	1,685
45 to 54	1,412	850	2,262
55 to 64	1,463	853	2,316
All Disabled	1,333	804	2,136

SOURCE: Medicare History Sample.

a. Sample is limited to those enrolled in both HI and SMI and does not include those with end-stage renal disease.

TABLE D-2. DISTRIBUTION OF DISABLED ENROLLEES BY LEVEL OF REIMBURSEMENT, 1978

Total Reimbursement (1984 dollars)	Percent of Disabled Enrollees[a]
$0	47.6
$1 - $500	19.9
$501 - $1,000	6.7
$1,001 - $5,000	14.6
$5,001 - $10,000	5.4
$10,000 and Above	5.8

SOURCE: Medicare History Sample.

a. Sample is limited to those enrolled in both HI and SMI and does not include those with end-stage renal disease.

TABLE D-3. DISTRIBUTION OF DISABLED ENROLLEES BY LEVEL OF MEDICARE-RELATED COST-SHARING, 1978

Cost-Sharing Amounts[a] (1984 dollars)	Percent of Disabled Enrollees
Less than $300	51.8
$301 - $500	17.6
$501 - $1,000	16.8
$1,001 - $2,000	9.9
$2,001 - $3,000	2.2
$3,001 - $4,000	0.8
More than $4,000	0.9

SOURCE: Medicare History Sample.

a. This figure includes SMI premiums and all Medicare deductibles and coinsurance. The Medicare History Sample does not capture all SMI liability. For those who do not meet the deductible limit, it is not possible to estimate their Medicare liability precisely. Thus, $40--reflecting the missing data--has been added to each enrollees liability.

APPENDIX E. FINDINGS FROM THE RAND STUDY

As briefly described in Chapter IV, an ongoing study conducted for the Department of Health and Human Services by the Rand Corporation represents the most comprehensive attempt yet made to model the effects of changes in insurance cost-sharing on medical care use and health status.

The results thus far are consistent with earlier nonexperimental findings in this area: with only a few exceptions, price affects both the number of people using medical services and the number of ambulatory medical visits per user. That is, for physician visits, both the percentage of persons seeking care and the frequency of their visits rise as cost-sharing declines. For hospital use, the number of users was negatively related to cost-sharing but cost per person was not. (This latter result may, however, be attributable to a cap placed on patient liability, which meant that, beginning early in a hospital stay, additional days and services would be covered at no cost.[1]) The other major exception to the general findings was that medical expenditures for children were not as responsive, particularly in the case of hospitalization.

In the Rand study, families were assigned to different insurance plans (where the amounts of deductibles and coinsurance varied) by a technique ensuring that individual and family characteristics of participants were similar for all plans. Consequently, different patterns of health use observed among the plans may be attributed to differences in the deductibles, coinsurance, and liability "cap." Coinsurance rates, reflecting the fraction of the bill paid by the family, were varied between 0 (free care) and 95 percent. A maximum dollar expenditure limit of $1,000 was set on the family's liability--a limit comparable to about $1,635 of health care in 1982.[2] In the plan with 95 percent coinsurance (on outpatient services), a lower cap of $150 per person or $450 per family implicitly made the plan

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1. The cap was set at $1,000 or 5, 10, or 15 percent of income, whichever was lower (and depending upon the plan). Seventy percent of hospitalized patients reached their cap, meaning that no further cost-sharing was assessed. If the limit had been higher, it is possible that some effect on cost per hospital case would have been observed.

2. This figure is inflated by the health care component of the Consumer Price Index and thus reflects the amount of health services that could be consumed.

similar to an insurance scheme with a high initial deductible but comprehensive coverage for large expenses.

Total expenditures on health care varied considerably by type of insurance coverage. At the lowest extreme, families facing 95 percent coinsurance used only $254 worth of health care while, on average, those with free care (no coinsurance) used $401. Even a 25 percent coinsurance plan resulted in outlays 16 percent less than for free care.

Ambulatory expenditures also display the same patterns, both in the aggregate and among the various sample sites. Since figures for expenditures obscure differences in amounts of care and cost per service, the Rand results are also presented by number of visits. Much of the difference in ambulatory expenditures is attributable to the amount of care used, rather than to variations in cost per visit.

The results for hospital care are more ambiguous, with only the rate of hospital admission being very sensitive to type of plan. For adults, probability of hospital admission varied from 0.133 for those with free care to 0.082 for those facing 50 percent coinsurance. Expenditures once in the hospital show little variation among insurance plans.

Finally, as noted in Chapter IV, these findings suggest that coinsurance on physician visits may have an important impact on hospital use. The study finds that for families in the plan with 95 percent coinsurance on ambulatory services but free care for inpatient services, probability of hospital admission is lower than for families whose insurance fully pays for all types of care. This at first consideration seems counterintuitive since one might expect that families with free hospitalization but high coinsurance costs for outpatient care would attempt to substitute inpatient for outpatient services whenever possible. Rather, it suggests that it is the doctor who initiates hospitalization for a patient. If persons visit doctors less often as a result of high ambulatory coinsurance rates, this in itself seems likely to hold down hospital admissions even when hospital care is "free."

APPENDIX F. AVERAGE INCREASE IN MEDICARE COST-SHARING FROM VARIOUS OPTIONS, BY AGE AND TYPE OF ENROLLEE

The tables in this appendix show the average increase in Medicare cost-sharing that would occur under the options described in Chapter V, by type of enrollee--aged or disabled--and by age of enrollee. Based on simulations from the Medicare History Sample, these results are applicable to all those enrolled in both HI and SMI. Although this includes most aged beneficiaries, over 8 percent of disabled HI beneficiaries are not enrolled in SMI.

The results for the disabled, which are not discussed in detail in Chapter V, differ from those for the elderly because of different patterns of use of Medicare-covered services. This is particularly the case for SMI coverage, where the disabled are more likely to use Medicare services than the elderly.

The first three options--increasing the SMI premium, the SMI deductible, and the HI deduction--are not shown in a table since they vary little by age group. For the disabled, not all of whom participate in SMI, the $70 increase in SMI premiums in calendar year 1984 would only average $64 among all disabled Medicare beneficiaries. The increase in the SMI deductible for the disabled would be very similar to the amount for the elderly--averaging $13 per enrollee in 1984.

TABLE F-1. AVERAGE INCREASE IN MEDICARE COST-SHARING COINSURANCE OPTIONS BY AGE AND TYPE OF MEDICARE ENROLLEE (In 1984 dollars)

Age and Type of Enrollee	25 Percent SMI Coinsurance	10 Percent Hospital Coinsurance	10 Percent Hospital Coinsurance on Days 2-30
Elderly	40	72	52
65-69	36	52	38
70-74	39	55	40
75-79	41	81	63
80 and above	47	109	76
Disabled	54	68	38
Under 45	46	59	33
45-54	57	59	24
55-64	58	78	50

SOURCE: Congressional Budget Office simulations using the Medicare History Sample.

TABLE F-2. AVERAGE INCREASE IN MEDICARE COST-SHARING FOR COMBINATION OPTIONS BY AGE AND TYPE OF MEDICARE ENROLLEE (In 1984 dollars)

Age and Type of Enrollee	10 Percent Hospital Coinsurance and Increased SMI Premium[a]	10 Percent Hospital Coinsurance and Increased SMI Coinsurance[a]	Coinsurance Changes on Hospitals, SNFs, and Home Health[a]
Elderly	120	112	74
65-69	106	88	53
70-74	108	94	56
75-79	131	122	84
80 and above	145	156	112
Disabled	110	122	69
Under 45	105	105	60
45-54	96	116	60
55-64	122	135	80

SOURCE: Congressional Budget Office simulations using Medicare History Sample.

a. See Chapter V for a more detailed definition of the options.

TABLE F-3. AVERAGE ADDITIONAL MEDICARE COST-SHARING FOR HOSPITAL COINSURANCE WITH VARIOUS COST-SHARING LIMITS BY AGE AND TYPE OF ENROLLEE (In 1984 dollars)

Age and Type of Enrollee	10 Percent Hospital Coinsurance and Limits on Cost-Sharing of:					
	1,000	2,000	3,000	4,000	2,000-4,000[a]	1,500-3,000[b]
Elderly	-81[c]	15	46	59	29	10
65-69	-70	5	29	40	--[d]	--[d]
70-74	-80	2	28	40	--[d]	--[d]
75-79	-70	29	61	73	--[d]	--[d]
80 and above	-106	29	76	93	--[d]	--[d]
Disabled	-145	-35	9	31	-14	-40
Under 45	-116	-30	3	20	--[d]	--[d]
45-54	-174	-58	-10	17	--[d]	--[d]
55-64	-146	-25	22	45	--[d]	--[d]

SOURCE: Congressional Budget Office simulations using the Medicare History Sample.

a. This limit would vary by income: $2,000 for those with family income less than $20,000, $4,000 for those with incomes above $22,000, and a gradual phase-in between $20,000 and $22,000.

b. This limit would vary by income: $1,500 for those with family income less than $20,000, $3,000 for those with incomes above $21,500, and a gradual phase-in between $20,000 and $21,500.

c. Average decrease indicated by negative numbers.

d. Not available.